NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

BUDGET ESTIMATES

FISCAL YEAR 2006

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CONGRESSIONAL SUBMISSION

NATIONAL OCEAN SERVICE
OPERATIONS RESEARCH AND FACILITIES
FY 2006 OVERVIEW

SUMMARIZED FINANCIAL DATA

($ in thousands)

Operations Research and Facilities	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Navigation Services	143,739	144,002	120,746	139,505	18,759
Ocean Resources Conservation and Assessment	198,407	244,563	122,403	128,006	5,603
Ocean and Coastal Management	158,759	152,680	125,717	126,719	1,002
TOTAL	500,905	541,245	368,866	394,230	25,364
FTE	1,185	1,207	1,215	1,225	10

For FY 2006, NOAA requests an increase of $25,364,000 and 10 FTE for a total of $394,230,000 for the National Ocean Service (N0S) Operations, Research and Facilities account.

The National Ocean Service (NOS) is the primary Federal agency working for the coast through the observation, measurement, assessment, and management of the Nation's coastal and ocean areas, as well as conducting response and restoration activities to protect vital coastal resources. More than 148 million people – over 53 percent of the national total – currently reside along the narrow coastal fringes. The population in these coastal areas is expected to increase to about 165 million by the year 2015. This population growth and development places many of the Nation's coastal areas under increasing pressure, burdening local environments and threatening the very resources that draw people to the coast.

As a national leader for coastal stewardship, NOS promotes a wide range of research activities to create the strong science foundation required to advance the sustainable use of our precious coastal systems. NOS provides improvements in the quality, quantity, geographic distribution, and timeliness of ocean and coastal observations. These observations are critical components of the Nation’s Integrated Ocean Observing System, as well as fundamental contributors to the Global Earth Observation System of Systems. NOS mapping, charting, geodetic, and oceanographic activities build on the marine and coastal observations collected to increase the efficiency and safety of marine commerce and support coastal resource management. NOS protects and restores coastal resources injured by releases of oil and other hazardous materials. NOS also manages marine sanctuaries and, in partnership with the coastal states, helps manage the Nation's valuable coastal zones and nationally significant estuarine reserves.

NOS has three subactivities: Navigation Services, Ocean Resources Conservation and Assessment, and Ocean and Coastal Management.

The objectives of the Navigation Services subactivity are to:

- Build, Maintain, and Deliver a Nautical Charting Database
- Update Nautical Surveys
- Define the National Shoreline
- Develop the National Spatial Reference System
- Provide Real-Time Observations and Forecasts of Water Levels, Tides, and Currents

To achieve these objectives, NOAA conducts activities in several program areas within the Office of Coast Survey, the National Geodetic Survey, and the Center for Operational Oceanographic Products and Services. NOAA also represents these programs at an interagency level on the Interagency Committee for the Marine Transportation System. This committee was recently recommended for codification by the U.S. Commission on Ocean Policy and supported by the President's U.S. Ocean Action Plan.

The objectives of the Ocean Resources Conservation and Assessment subactivity are to:

- Establish the framework through which the authorities of Federal and state agencies can be focused to protect and restore coastal resources.
- Recommend management actions to minimize the cumulative effects of coastal development on natural resources, especially NOAA's trust resources.
- Conduct research to define the nature and extent of human activities and conditions that threaten the health and productivity of the Nation's coastal resources.
- Conduct damage assessments to support negotiated settlements and litigation for recovering funds for restoration of injuries to NOAA's trust resources.
- Apply scientific expertise to mitigate the effects of human activities and facilitate environmental recovery, and undertake actions to restore ecosystem functions and resource values.
- Develop a Federal/state capability to research, monitor, assess, and predict coastal ecosystem structure and function to detect changes, evaluate management strategies, and identify actions to effectively manage threats to ecosystem health.
- Develop means for valuing non-market ecological resources and clarify the causes and significance of ecosystem changes.
- Develop new tools, technologies, and strategies for monitoring, protecting, restoring, and managing the health of coastal ecosystems, including coral reefs.
- Improve public understanding of functions and values of coastal ecosystems and enhance public access to information on coastal environmental quality and health risks from pollutants.
- Facilitate transfer of technology for protecting against or reducing impacts of coastal development on natural resources, and restoring injured resources.
- Support NOAA's and the Nation's obligations under international treaties and conventions, and increase effectiveness of international programs for coastal environmental science and technology, integrated coastal zone management, and sustainability of coastal resources.

This subactivity contains the programs managed by the National Centers for Coastal Ocean Science (NCCOS), the Office of Response and Restoration (ORR), the Coastal Services Center (CSC) and the Cooperative Institute for Coastal and Estuarine Technology (CICEET), co-administered by NOS' Office of Ocean and Coastal Resource Management and the University of New Hampshire. The goals of this subactivity use the authorities established in the Clean Water Act, Coastal Zone Management (CZM) Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/Superfund), Oil Pollution Act, National Coastal Monitoring Act, Marine Protection Research and Sanctuaries Act, Harmful Algal Bloom and Hypoxia Research and Control Act, Estuaries Restoration Act, Coral Reef Conservation Act, and other legislation to protect, conserve, and restore natural resources and the environmental quality of the Nation's coastal ecosystems.

The objectives of the Ocean and Coastal Management subactivity are to:

- Maintain and improve the quality and utility of the Nation's coastal lands and waters through a national network of Federally-approved, coordinated, and supported state management programs.
- Maintain the balance between resource protection and coastal-dependent economic activity.
- Provide technical assistance to states in the development, implementation, and improvement of state CZM programs and estuarine research reserves.
- Identify areas of the marine environment of special national significance due to their resource or human-use values.
- Develop the framework for a national network of marine protected areas.
- Support and coordinate scientific research on, and monitoring of, resources in protected areas.
- Coordinate the development of information, tools, strategies, and guidance to enhance and expand the protection of marine protected areas.
- Conduct a comprehensive, coordinated program of conservation and management of special marine areas.
- Enhance public awareness, understanding, and appreciation of the marine environment.
- Facilitate public/private uses of the resources of special marine areas compatible with resource protection.

To achieve these objectives, NOAA conducts activities in several program areas within the Office of Ocean and Coastal Resource Management, the Marine Protected Areas Center and the National Marine Sanctuary Program Office.

In addition, NOS contributes significantly to achieving two of NOAA's Strategic Plan Mission Goals: Support the Nation's commerce with information for safe, efficient, and environmentally sound transportation, and Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management. While these two goals capture much of the National Ocean Services' activities, NOS also supports and makes important contributions to NOAA's other mission goals: Understand climate variability and change to enhance society's ability to plan and respond, Serve society's needs for weather and water information, and Mission Support.

Significant Adjustments-to-Base (ATBs):

NOAA requests an increase of $7,923,000 and 0 FTE to fund adjustments to current programs for the National Ocean Service activities. The increase will fund the estimated FY 2006 Federal pay raise of 2.3 percent and annualize the FY 2005 pay raise of 3.5 percent. The increase will also provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Service Administration (GSA). Finally, it will restore rescissions taken in the FY 2005 Appropriation.

NOS also requests the following transfers between line offices for a net change to NOAA of zero.

From Office	Line	To Office	Line	Amount
NOS	NOS/Various Line Items	OMAO	NOAA Corps	- $153,000
NOS	NOS/Various Line Items	USAO	General Counsel	-9 FTE and -$480,000

The $153,000 transferred to OMAO partially funds 9 NOAA Corps Officer positions that benefit NOS. The General Counsel 9 FTE are being realigned to reflect reversal of the General Counsel FTE transfer proposed in the FY 2004 President's Budget and to alleviate a shortfall in funding for that office.

In addition, NOAA proposes the following transfers of funding within the National Ocean Service. Under the Mapping and Charting line item, the budget proposes to transfer funding for the Vessel Time Charter line to the Address Survey Backlog budget line. Funds in the Address Survey Backlog line will continue to be used exclusively to contract for support in the acquisition and processing of hydrographic data. This transfer provides greater management efficiency and flexibility in NOAA's efforts to reduce the hydrographic survey backlog. Under the Ocean Assessment Program line item, NOAA proposes to transfer funding from the Ocean Assessment Program Base to a new National Centers for Coastal Ocean Science line item in order to consolidate funding for this Program Office in one section of the NOS budget.

Subactivity: Navigation Services
Line Item: Mapping & Charting

GOAL STATEMENT:

NOAA's NOS will reduce the risks to life, property and the coastal environment and enhance NOS' role of coastal stewardship by providing a comprehensive set of products and services to meet the Nation's need for accurate and up-to-date marine navigation information.

BASE DESCRIPTION:

NOAA's Mapping and Charting Program is carried out by the Office of Coast Survey (OCS). Established by President Thomas Jefferson in 1807, the Coast Survey is the oldest U.S. scientific organization, and has a long history of supporting and facilitating marine commerce. Today, it continues to promote safe navigation, and meets the challenges of navigating larger ships and those that carry hazardous cargo. NOAA collects, manages, and maintains a variety of marine navigational data important to navigators, including the nature and form of the coast, the depths of the water and general character and configuration of the sea bottom, locations of dangers to navigation, the rise and fall of the tides, and locations of aids to navigation. These data enable NOAA to construct and maintain the national suite of 1,000 nautical charts, and develop other products such as the *Coast Pilot* publication, which is a series of nautical books that covers a variety of information important to navigators. These products support commercial shipping, the fishing industry, U.S. Navy and Coast Guard operations, state and local governments, and recreational boaters throughout the United States. The Mapping and Charting Program also conducts research and development activities to improve the efficiency and productivity of data collection, chart compilation and chart production.

The Mapping and Charting Line Item consists of four primary program elements. Each program element within the Mapping and Charting Line directly supports NOAA's Commerce and Transportation, Weather and Water, and Ecosystems goals. The Mapping and Charting Line Item also includes funding for the Joint Center for Hydrographic Excellence at the University of New Hampshire, which operates in partnership with NOAA's National Ocean Service. The program serves as a learning center for new government and private sector hydrographers, as well as a research and development center for new hydrographic technologies and applications. The program is aimed at creating a national center for expertise in ocean mapping and hydrographic sciences.

Program Assessment and Rating Tool (PART): NOAA's Mapping and Charting program was reviewed with OMB's Program Assessment and Rating Tool (PART) during the FY 2005 budget process. As a result, NOAA's Mapping and Charting program is developing new long-term outcome measures. Specifically, NOAA has initiated a project with the U.S. Merchant Marine Academy to analyze U.S. Coast Guard accident data for navigation-related events to determine a baseline and targets for accident reduction via improved utility of NOAA navigational products and services.

NAUTICAL CHARTING PROGRAM

The Nautical Charting Program is carried out by NOS' Office of Coast Survey (OCS). NOAA is responsible for surveying and charting U.S. and territorial waters to the limits of the Exclusive Economic Zone (EEZ), an area of about 3.4 million square nautical miles. NOAA is authorized by the Coast and Geodetic Survey Act of 1947 to provide nautical charts and products for safe maritime commerce. Title 33 of the Code of Federal Regulations requires NOAA charts be carried on all self-propelled vessels greater than 1600 gross tons. Nautical charts and related navigation publications are the basic tools for marine navigation, ocean operations, and marine resources planning and management. NOAA's digital nautical charting products, such as Electronic Navigational Charts (ENCs), serve as the basic component required to fuel new electronic systems that can meet demands for greater protection of life, property, and the environment, as well as significantly improve the efficiency of maritime commerce.

HYDROGRAPHIC SURVEY PROGRAM

The Hydrographic Survey Program is carried out by OCS. The program is focused on addressing the existing backlog of critical hydrographic surveys needed in U.S. waters. These hydrographic surveys provide the most basic data for the production of nautical charts. Coastal and ocean hydrographic data are also a fundamental component of the Nation's Integrated Ocean Observing System. NOAA is responsible for surveying and charting U.S. and territorial waters to the limits of the EEZ, an area of about 3.4 million square nautical miles. In 1994, NOAA identified approximately 537,000 square nautical miles of the U.S. Exclusive Economic Zone as navigationally significant and in need of resurvey. Since that time, NOAA has focused primarily on surveying and reporting its accomplishments in the highest priority areas, many of which carry heavy commercial traffic, are less than 30 meters deep, and change constantly. These characteristics significantly increase the risk to marine transportation. However, this critical area constitutes only a small portion (8%) of the entire navigationally significant area used by large commercial vessels and recreational boaters. NOAA's surveying activities balance in-house resources with contracts and use the latest full bottom coverage sounding technologies to survey the nation's coastal areas for navigation. NOAA utilizes private contractors to supplement its in-house resources to conduct hydrographic data collection. Funding for NOAA's in-house hydrographic survey vessels is requested in NOAA's Office of Marine and Aviation Operations.

MARINE MODELING AND GEOSPATIAL TECHNOLOGY PROGRAM

The Marine Modeling and Geospatial Technology Program is carried out by OCS. The program focuses on improving cartographic, hydrographic, and oceanographic systems used by NOAA to provide products and services for the coastal marine community, particularly in support of safe and efficient navigation and the utilization and protection of the coast. The program develops techniques and methods for the analysis, simulation and accurate real-time prediction of oceanographic, atmospheric and water quality parameters. Projects include estuarine and port modeling and forecasting, coastal modeling and forecasting, and operational data resources. These models are an important contributor to the utility of a national Ocean Observing System, because they provide the capacity for data integration. The program also develops techniques and technology for improving nautical charts, providing vector data for marine Geographic Information Systems, efficiently and accurately measuring depths, shoreline and bottom characteristics, and locating underwater hazards. Efforts include bathymetric/topographic projects, vector electronic chart standards development, technology advances in shallow-water multibeam and high-speed high-resolution side-scan sonars, and on-the-fly Global Positioning System (GPS) for settlement and squat determination and vertical control of hydrographic surveys.

NAVIGATION SERVICES PROGRAM

The Navigation Services Program is also carried out by OCS. This Program provides a focal point for customer requests and associated responses on charting issues, conducts fast-response hydrographic surveys to verify chart changes and accuracies, and maintains the Coast Pilot, a supplemental aid to the nautical chart. NOAA Navigation Managers are regionally based representatives who resolve charting and navigation questions, educate constituents on emerging charting technologies and their uses, and solicit feedback on NOAA's navigation products and services from the commercial maritime industry. This face-to-face contact facilitates NOAA's efforts to improve response to customer needs and issues. NOAA's Navigation Response Teams (NRTs) are another crucial means of connecting with the maritime community that have proven their worth in a number of ways. Established under the guidelines of the Hydrographic Services Improvement Act of 1998, the NRTs are designed to be fully mobile regional survey teams. The NRTs conduct ENC validation surveys, chart discrepancy and shoreline boundary examinations using diving operations, data collection, and mapping support capabilities. Because NRTs operate and are on call in 365-day-a-year, 24x7 mode, they also provide a critical emergency response role for stakeholder survey requests following natural or man-made disasters. NOAA's NRTs have performed post-hurricane surveys to ensure safety of navigation and resumption of maritime commerce, surveying in the wake of maritime accidents to locate cause and debris, and Homeland Security support through the supply of sea bottom data from restricted navigational areas to the U.S. Navy Mine Counter Measures effort.

COASTAL MAPPING PROGRAM

The Coastal Mapping Program is carried out by NOS' National Geodetic Survey (NGS). The primary objective of the program is to define the national shoreline in support of nautical charting, although the program performs a number of other activities with important applications. The national shoreline is the delineation of the 95,000 miles of U.S. shoreline on a map or in a digital database. Since it is the official U.S. shoreline, measurements must be accurate, consistent, and up-to-date. The national shoreline provides the critical baseline data for demarcating America's marine territorial limits, including its EEZ, and for the geographic reference needed to manage coastal resources and many other uses. These shoreline data are considered authoritative when determining the official shoreline for the United States. The Hydrographic Services Improvement Act of 1998 provides NOAA with explicit authority to promulgate national standards for all information acquired for nautical charting purposes, which includes shoreline. Critical portions of the national shoreline around port areas should be redefined on a 5-year cycle. Other areas of the coastline can be maintained on a 10-year cycle. Products of the Coastal Mapping Program are essential to NOAA's nautical charting program and other environmental programs dealing with the coastal zone.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

No legislation proposed.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Navigation Services	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Mapping & Charting					
Mapping & Charting Base (CT)	37,154	27,233	38,115	42,097	3,982
Mapping & Charting Base (WW)	989	-	1,898	1,898	-
Seacoast Science Center (COA)	-	493	-	-	-
Joint Hydrographic Center	4,298	7,492	7,499	7,499	-
Joint Hydrographic Center - Bathymetric Study	3,166	-	-	-	-
Marine Modeling & Geospatial Technology	-	1,084	-	-	-
Hydrographic Surveys	-	1,282	-	-	-
Electronic Navigational Charts	4,304	4,239	4,300	6,190	1,890
Nautical Charting	-	6,406	-	-	-
Navigational Services	-	1,858	-	-	-
Shoreline Mapping	3,676	2,413	2,448	2,448	-
Shoreline Mapping-Chesapeake Bay	989	986	-	-	-
Shoreline Mapping-Aerial	989	986	-	-	-
Payment to OMAO	2,764	2,753	-	-	-
Address Survey Backlog/Contracts	23,413	18,727	21,000	31,487	10,487
Address Survey Backlog-EEZ Outer Continental Shelf Ocean Bottom Claims	2,203	2,168	-	-	-
Address Survey Backlog-Gulf of Alaska	2,473	2,463	-	-	-
Address Survey Backlog-North Pacific	989	986	-	-	-
Address Survey Backlog-North Pacific Maritime Boundary Line	989	986	-	-	-
MS/LA Digital Coast	495	789	-	-	-
Vessel/Time Charter	(50)	1,971	-	-	-
Subtotal: Mapping & Charting	88,841	85,315	75,260	91,619	16,359
TOTAL	88,841	85,315	75,260	91,619	16,359

Subactivity: Navigation Services	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
FTE	338	318	318	323	5

PROGRAM CHANGES FOR FY 2006:

NOAA requests an increase of $3,982,000 and 5 FTE for a total of $43,995,000 for Mapping and Charting activities, as follows:

Mapping and Charting Base/Navigation Data Acquisition and Processing Improvements (1 FTE and +$1,000,000): NOAA requests an increase of $1,000,000 and 1 FTE to develop and operationalize data collection and processing improvements for hydrographic and shoreline data. Hydrographic and shoreline data are the most critical and time-sensitive elements of a nautical chart. Due to recent advancements in technology, the trend toward higher resolution datasets, and congressional support for increased data acquisition, NOAA is facing a situation wherein more data is collected than can be processed and applied to charting products in a timely manner.

With the requested funds, NOAA will invest approximately $560,000 in data management research and technology development to improve the speed and accuracy of data acquisition, and accelerate the delivery of navigation information to the maritime community for safe, efficient, and environmentally sound marine transportation. NOAA will begin to operationalize its research into the benefits of new technologies and delivery mechanisms such as geographic information systems and web-based interactive programs. For example, NOAA is currently developing a prototype Automated Tide Window web-based tool to optimize shoreline data collection flight times. Eliminating the need for case-by-case determinations of high and low water, the Automated Tide Window will provide direct access to tide information via the Internet and will result in time savings for the flight crew and support personnel, as well as more efficient use of the plane.

Approximately $200,000 will be used to improve shoreline data updates by procuring commercial satellite shoreline imagery for change analysis. Satellite imagery is a valuable tool for identifying where significant shoreline change has occurred and new data collection is needed. $240,000 will be used to procure and deploy GPS-enabled buoys to improve the collection of hydrographic data. This effort will reduce the time required to post-process hydrographic data for tide correctors, thereby accelerating delivery of the survey for application to the chart by up to 10 days per survey— a 5% improvement over the delivery time.

Performance Goals and Measurement Data

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs” under the Department of Commerce Strategic Goal of “Observe, protect, and manage the Earth's resources to promote environmental needs. This increase will report to the GPRA measure for Commerce and Transportation, “Increase the area (square nautical miles) of

critical Hydrographic Survey Backlog surveyed from 55% in 2006 to 80% in 2010." The increase will provide NOAA with new technologies that will improve the collection of hydrographic data and allow for quicker distribution of information to the maritime community.

Performance Goal: Commerce and Transportation	2006 without increase	2006 with increase
Average number of days from hydro survey data acquisition to chart application	220	This increase will allow a 5% increase in service delivery while accelerating delivery of products by up to 10 days

Mapping and Charting Base/VDatum (2 FTE and +$2,000,000): NOAA requests $2,000,000 and 2 FTE to implement the National Vertical Datum Transformation Tool database, or VDatum. This tool supports NOAA's requirement to acquire hydrographic and shoreline data for nautical charting products and to continually improve surveying and data delivery techniques. VDatum will benefit NOAA's modernization efforts in shoreline measurement and hydrographic surveying for navigation safety. In addition, the tool will enable the blending of geospatial datasets among federal/state/local agencies and academia that currently cannot be shared due to disparate reference datums.

A datum is the reference level to which geospatial data is gathered. NOAA, for example, collects its hydrographic data to a vertical datum of Mean Lower Low Water and shoreline data to Mean High Water in the interest of charting for safe maritime commerce and transportation. However, geospatial data is routinely collected at a variety of vertical reference datums for different purposes by other parts of NOAA and many other agencies and entities. For example, the Federal Emergency Management Agency (FEMA) received $150M in 2003 and $200M in 2004 from Congress to collect shoreline data for the purpose of improving coastal erosion mapping. Without the ability to correct the vertical datum reference, this wealth of shoreline information is currently unusable to NOAA's charting program.

To address this problem, NOAA has developed VDatum, a revolutionary vertical datum transformation tool. VDatum translates geospatial data between vertical reference systems and removes the most serious impediments to data sharing. This allows for the easy and accurate transformation of elevation data from one vertical datum to another. VDatum also permits NOAA to make full use of recent technological advancements (such as kinematic GPS and Light Detection and Ranging [LIDAR] mapping) that will greatly improve the efficiency with which it acquires new and more accurate data for its navigational and geospatial products and services. In addition, VDatum gives NOAA and other mapping agencies the ability to seamlessly integrate geospatial data for numerous critical applications to the benefit of the U.S. public. For example, NOAA, USGS, FEMA, the National Geospatial-Intelligence Agency, and state mapping agencies can share and integrate elevation data for applications such as Homeland Security and natural disaster preparedness. Developing VDatum to combine onshore and offshore data in a seamless geodetic framework was the primary recommendation of a 2003 National Academy of Sciences report titled A Geospatial Framework for the Coastal Zone that assessed national needs for coastal mapping and charting.

The requested increase will enable NOAA to transition VDatum from successful demonstration projects in areas such as Tampa Bay, Delaware Bay and South East Louisiana, to a national scale. Airborne, land, and marine platforms will be able to exploit GPS technology for vertical location, fuse GPS

height with other remote sensing technologies, and map the national coastline, both above and below water, with greater ease and accuracy. The tool will also improve the efficiency and accuracy of hydrographic surveys for nautical charts by eliminating the need for time-consuming water level corrections and post-processing. VDatum models have multiple uses in addition to mapping. For example, models recently developed for Puget Sound are being used for tsunami inundation applications. They also support sea level rise impact studies and more accurate storm surge inundation maps.

With the requested increase, NOAA will expand National VDatum to approximately 20% of the contiguous U.S. in FY 2006, reaching 100% coverage by 2010. The requested funds will be used to contract for tidal and geophysical modeling expertise, the design and construction of a Web-accessible multi-resolution database, temporary tide gauge installations around the country, and GPS referencing equipment to validate the models. Two FTE are requested to provide modeling expertise across different program areas (oceanographer, geodesist), as well as contract oversight.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs." This increase will report to the GPRA measure for Commerce and Transportation. "Increase the area (square nautical miles) of critical Hydrographic Survey Backlog surveyed from 55% in 2006 to 80% in 2010. NOAA will accomplish this by increasing the number of new mapping and assessment tools made available through a nationwide vertical-datum transformation tool and topographic/bathymetrical mapping. Continued development and use of the National Vdatum database will enhance the U.S. transportation system by providing more accurate mapping tools at a lower cost to users.

Performance Goal: Commerce and Transportation	2006 without increase	2006 with increase
Cumulative percentage of continental U.S. included in the National VDatum database	8%	NOAA will expand National VDatum to approximately 20% of the contiguous U.S

Mapping and Charting Base/Socioeconomic Analysis (0 FTE and +$300,000): NOAA requests an increase of $300,000 and 0 FTE to analyze its efforts in supporting the nation's commerce with information for safe, efficient and environmentally sound transportation. The increase will enable NOAA to study the socioeconomic value of its products and services in order to validate its requirements and responsibilities, better articulate and quantify the benefits of its programs, and more effectively prioritize NOAA's resource investments.

Industry, public and government entities involved with commerce and transportation depend on a wide range of NOAA information, products and services. These include NOAA's navigation products and services; weather information for air, marine and surface transportation; positioning capabilities; emergency response to oil/chemical spills and natural disasters; and commercial remote sensing licensing. NOAA knows that these programs provide

value to the nation – they help save lives and property, protect the environment and support the economy – but NOAA has not effectively quantified that value, nor can it articulate well the extent to which users rely on these services. Data on the economic value and utility of NOAA's suite of "Commerce and Transportation" goal products and services will help NOAA to set funding priorities and better allocate taxpayer resources.

With the requested increase, NOAA will contract with independent research firms to systematically collect, compile and analyze new or existing data from industry, academia and other Federal, state or local agencies relating to the national socioeconomic benefit of NOAA's Commerce and Transportation-goal related programs. Using a consistent, rigorous, and scientifically defensible methodology, this approach will generate information about the social and economic effects, benefits, and costs of NOAA programs, information and services. NOAA will use these analyses to prioritize products/services/uses, as well as to identify areas requiring more focused research into economic benefits and social science information to meet future user needs.

Performance Goals and Measurement Data

Research on the socio-economic benefits of NOAA's commerce and transportation-related products and services will ensure that NOAA focuses its efforts and limited resources on the most beneficial activities. The proposed increase will strengthen the Department of Commerce's goal to "Support the Nation's commerce with information for safe, efficient, and environmentally sound transportation." By helping NOAA to develop better performance measures, this increase request also responds to recommendations from OMB's FY 2005 PART of NOAA's Mapping and Charting program. The PART recommended that the program "continue to develop long-term performance measures that clearly link to annual goals" and "work to use efficiency measures more actively to guide program management." Data on the economic value and utility of NOAA's suite of Commerce and Transportation products and services will help NOAA to set funding priorities and better allocate taxpayer resources.

Mapping and Charting (2 FTE and +$682,000): NOAA requests an increase of $682,000 and 2 FTE to enable NOAA to rebuild capacity for its navigation response teams. The requested increase will allow NOAA to fully staff, train and implement Navigation Response Teams (NRTs) 5 and 6. The increase request will restore contract support and FTE for full staffing, as well as funds for NRT launch maintenance and routine equipment replacement. Without the requested funds, these teams may have to stand down. NRTs support critical ENC field verification, emergency response activities associated with natural and man-made disasters, support to National Homeland Security activities, and Marine Transportation System constituent requirements.

Electronic Navigational Charts (0 FTE and +$1,890,000): NOAA requests an increase of $1,890,000 and 0 FTE for a total of $6,190,000 for Electronic Navigational Charts (ENCs) to continue the planned incremental investment in the effort to provide full contiguous ENC coverage of U.S. waters.

This increase will allow NOAA to add 145 ENCs in FY 2006, for a total of 670 built and maintained. At the requested funding level, NOAA should achieve complete Electronic Navigational Chart coverage for the nation by the end of FY 2008. This funding level will allow NOAA to keep the full chart suite under continuous cartographic maintenance. 100% of the additional funds would be used for ENC maintenance and verification activities.

NOAA's role in providing the Nation with safe navigation tools is more important than ever, given the rapid growth of the U.S. Marine Transportation System (MTS). As the Nation's dependence on the MTS grows, better navigation information is critical to protect lives, cargo and the environment. It is crucial for mariners to know where and when changes occur in the nation's ports, harbors, waterways, and offshore waters to help prevent accidents and groundings. Reducing these risks would, in part, be achieved by improving the navigation information that NOAA provides to the Nation. GPS technology has advanced to such a degree that mariners are now able to plot their position on a traditional nautical chart to a degree of accuracy that oftentimes far surpasses the accuracy of the soundings and features on the chart itself.

ENC's represent a major step forward in providing chart data to mariners for safe navigation in U.S. ports and waterways. They give the user more complete and valuable information than the paper chart, and can provide much greater accuracy than existing chart products. More than just a picture, ENCs are essentially a database of chart features that can be intelligently processed and displayed by electronic charting systems. An ENC displayed by an electronic charting system, when combined with input from other sources such as GPS and real-time oceanographic data, is able to warn of hazards to navigation and situations where the vessel's current track will take it into danger. These highly advanced and accurate digital navigation tools are in demand by mariners to support the electronic bridges now on board ships. NOAA's ENCs are available for free download on NOAA's website at nauticalcharts.noaa.gov.

ENC data may also be used in geographic information systems for a multitude of applications beyond navigation, including port planning, port security, habitat mapping and coastal zone management. In FY 2004 NOAA released a version of the ENC designed for non-navigation users such as coastal zone managers. This version translates the ENC data to a GIS-friendly format so that the resulting product can be used for a variety of non-navigational purposes that involve geospatial analyses.

Performance Goal: Commerce and Transportation	2006 without increase	2006 with increase
Number of ENCs in continual maintenance (cumulative)	600	670

Address Survey Backlog/Contracts (0 FTE and +$10,487,000): NOAA requests an increase of $10,487,000 and 0 FTE for a total of $31,487,000 to maintain its planned FY 2006 survey schedule to collect and process approximately 3500 square nautical miles of hydrographic data. The increase would go to contracts for data acquisition.

Hydrographic survey data is the foundation of NOAA's nautical charts, as well as a basic parameter of our national Integrated Ocean Observing System. NOAA is working to reduce the backlog of charted areas in need of survey, and to improve the accuracy of the data collected. NOAA effectively uses contract and in-house resources to survey U.S. waterways for safe maritime transit. Ninety-five percent of America's non-NAFTA trade moves through the marine transportation system. The combination of high vessel traffic, hazardous cargo, and ships operating close to the ocean bottom make accurate

navigation information ever more essential for the safety of lives, property and the environment. Requested funding provides critical survey data to directly enhance the safety of mariners, the public, and the Nation's economy.

Performance Goal: Commerce and Transportation	2006 without increase	2006 with increase
Reduce the hydrographic survey backlog within navigationally significant areas (snm per year)	3000	3500

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Joint Hydrographic Center ($57,000); Shoreline Mapping – Chesapeake Bay ($986,000); Shoreline Mapping – Aerial ($986,000); EEZ Outer Continental Shelf Ocean Bottom Claims ($2,168,000); Gulf of Alaska ($2,463,000); North Pacific ($986,000); North Pacific Maritime Boundary Line ($986,000); MS/LA Digital Coast ($789,000); Payment to NMAO ($2,753,000).

Subactivity: Navigation Services
Line Item: Geodesy

GOAL STATEMENT:

Within the United States and its territories, anyone should be able to obtain centimeter level accuracy in positions (latitude, longitude, and height) anywhere, anyplace, anytime.

BASE DESCRIPTION:

The mission of the NOAA Geodesy Program is to evolve and deliver the nation's foundation of reference for positioning activities to support (1) public safety; (2) economic prosperity; and (3) environmental well being. NOAA's Geodesy Program is carried out by the National Geodetic Survey (NGS), which manages the National Spatial Reference System (NSRS) – the national coordinate system that specifies latitude, longitude, height, scale, gravity, and orientation throughout the nation. NSRS must continually evolve to meet the growing demand for more accurate, timely, and consistent positioning services. The Geodesy Line Item can be grouped into five major overlapping program elements: Permanent Network infrastructure, Continuously Operating Reference Stations (CORS) Support, Height Modernization, Data Access and Outreach, and Tool and Model Development. Each program element within the Geodesy Line directly supports NOAA's Commerce and Transportation Goal.

PERMANENT NETWORK

A major component of NSRS is a network of permanently marked points including the Federal Base Network (FBN), the Cooperative Base Network, and the User Densification Network. These networks form a crucial foundation for all geographically referenced activities conducted in the U.S.

NOAA's primary network responsibility is the development of the national geodetic framework, the FBN. NOAA is committed to establishing, observing, monitoring, and maintaining a very high-accuracy, four-dimensional network of monumented stations at a 1 degree by 1 degree (75 km to 125 km) nominal spacing throughout the U.S. and its territories. The network contains additional stations as needed in areas of crustal motion in support of Federal aircraft navigational requirements. The goal of the FBN is to supply the highest level accuracies of geodetic latitudes, longitudes, and heights to benefit all users of positioning services.

NATIONAL CORS

NOAA collects and distributes GPS observational data from a nationwide network of permanently operating GPS receivers. The CORS System, consisting of these stations and a central data facility, make observational data available over the Internet from the network presently consisting of over 400 GPS receivers, with 100% of the conterminous U.S. being within 200 km of at least one CORS. The primary objective of National CORS is to provide local users with ties to the NSRS for post-processing position determination. CORS stations have been positioned, three dimensionally, at the 1-to 3-centimeter level (1/2 to 1 1/2 inches), and are used to greatly improve the accuracy of users' GPS positioning activities through the use of Differential GPS (DGPS) techniques. National CORS primarily serves the surveying, civil engineering, and geographic information system communities for locating, building, monitoring, and maintaining the nation's physical infrastructure in support of the broader national economy.

The US Department of Transportation operates the Coast Guard Maritime DGPS and the Nationwide DGPS. Both systems are used for transportation and navigation and both systems are incorporated into the National CORS network. NOAA, through National CORS, provides the integrity monitoring for these systems, helping to ensure their reliability for real-time transportation applications.

HEIGHT MODERNIZATION

Height Modernization is a NGS-led effort to enhance the vertical aspect of NSRS, through the use of GPS technology. Height Modernization can provide better access to accurate and consistent height data at the local level. Applications that benefit include:

- Sea level rise monitoring,
- Coastal erosion rates,
- Floodplain mapping,
- Storm surge modeling,
- Pollution trajectory modeling,
- Navigation: under-keel and under-bridge clearance,
- Seismic monitoring - subsidence and uplift,
- Precision agriculture,
- Structural monitoring - bridges, dams, and buildings,
- Intelligent transportation systems, and
- Surveying and mapping.

NOAA administers the national Height Modernization program through four cornerstone states: California, Wisconsin, Louisiana, and North Carolina (partnering with South Carolina). In NOAA's plan for national implementation of Height Modernization, these four states will serve as regional leaders for nationwide expansion of the Height Modernization program. Establishing one regional center to serve several states with common issues will establish the program management structure that is more likely to optimize the resources, technology, and benefits.

To fully expand Height Modernization nationwide is an enormous undertaking that will take many years. The task cannot be carried out entirely by the Federal Government. NOAA has been implementing Height Modernization since 1999 through collaboration with state governments, local partners, the private sector, and other federal agencies. NOAA has determined that rather than implementing Height Modernization on a state-by-state basis, a regional approach is preferable for a number of reasons. Many of the elevation issues addressed by Height Modernization are regional in nature. Issues such as coastal and riverine flooding in the Mid-Atlantic, tectonic movement along the West Coast, post-glacial rebound and improved efficiencies of intermodal transportation in the Great Lakes, and subsidence along the Gulf of Mexico, reach across state boundaries to affect entire geographical regions. A regional approach is also a more efficient use of both NOAA and partner funds and workforce.

NSRS TOOLS AND MODELS

NOAA's NGS develops standards, specifications, guidelines, and best practices for the surveying and positioning industry, as well as a variety of models describing geophysical and atmospheric phenomena that affect spatial measurements. These tools and models are crucial to scientific and commercial positioning activities.

NSRS DATA ACCESS AND OUTREACH

NOAA's NGS archives and provides access to geodetic control, shoreline, and aeronautical survey data from its own surveys and from cooperating organizations. These data are made available via the Internet on a full time basis. As part of its technology transfer efforts, NGS conducts a series of workshops and constituent forums in various parts of the country. NGS also manages the State Geodetic Advisor Program, which has advisors in over half of the states.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

No legislation is proposed.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Navigation Services	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Geodesy					
Geodesy Base	21,329	20,004	20,219	20,219	-
National Spatial Reference System	-	1,971	1,971	1,971	-
Height Modernization Regional Expansion - NGS Implementation	-	247	233	233	-
Height Modernization Regional Expansion - NC	983	986	933	933	-
Height Modernization Regional Expansion - CA	990	493	500	933	433
Height Modernization Regional Expansion - TX	-	739	-	-	-
Height Modernization Regional Expansion - SC	492	-	-	467	467
Height Modernization Study - MS	495	591	-	-	-
Geodetic Survey - KY	-	493	-	-	-
Geodetic Survey - LA	492	490	-	-	-
Geodetic Survey - WI	2,957	2,957	-	-	-
Geodetic Survey - WA	495	493	-	-	-
Geodetic Survey - AL	1,968	1,971	-	-	-
TOTAL	30,201	31,435	23,856	24,756	900
FTE	183	183	183	183	-

PROGRAM CHANGES FOR FY 2006:

Height Modernization Regional Expansion - CA (0 FTE and +$433,000): An increase $433,000 and 0 FTE for a total of $933,000, is requested for the California Spatial Reference Center. NOAA's support of this center has enabled California to develop a plan to establish and maintain an accurate state-of-the-art network of GPS control stations necessary to meet the demands of government and private businesses for a reliable spatial reference system in California. This infrastructure will aid public health and safety, assist in the protection and preservation of natural resources, and improve the productivity of government and private business.

Height Modernization Regional Expansion - SC (0 FTE and +$467,000): An increase of $467,000 and 0 FTE is requested for the South Carolina Geodetic Survey. This exemplary state program works to establish horizontal and vertical geodetic control throughout the state to allow land and land-

related items to be referenced to the national horizontal and vertical coordinate system. The Survey's efforts improve land records management, engineering, land planning, and economic development.

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Geodesy ($680,000); Height Modernization Regional Expansion-NGS Implementation ($14,000); Height Modernization-Regional Expansion –TX ($739,000); Height Modernization Study-MS ($591,000); Geodetic Survey-KY ($493,000); Geodetic Survey-LA ($490,000); Geodetic Survey-WI ($2,957,000); Geodetic Survey-WA ($493,000); Geodetic Survey-AL ($1,971,000).

Subactivity: Navigation Services
Line Item: Tide & Current Data

GOAL STATEMENT:

Provide the navigation community with access to real-time data and predictions of current speed and direction, water levels, and meteorological data (wind speed and direction, gusts, barometric pressure, etc.) to enable safer and more efficient vessel routing, flood warnings, emergency response operations to spills of hazardous materials, homeland security, and for real-time control of harbor maintenance dredging.

BASE DESCRIPTION:

The Tide and Current Data Program (TCDP) is a significant component of the integrated, comprehensive suite of NOAA information products required by the maritime community to ensure safe and efficient navigation, homeland security, improve oil and other hazardous material spill response, and support coastal resource management. NOAA is statutorily authorized to collect, analyze, and provide datums related to tide and water levels. The Act of August 6, 1947 (61 STAT, 787) 33 U.S.C. §§ 883 a-f authorizes collection and dissemination of water level data; Section 883a authorizes NOAA to conduct "Hydrographic ... tide and current observations;" Section 883b authorizes NOAA "to analyze and predict tide and current data, and process and publish data, information, compilations, and reports." The TCDP is operated by the Center for Operational Oceanographic Products and Services (CO-OPS). Observations and predictions of water levels and currents are collected and distributed to the marine transportation community and other users. The Tide and Current Data Line Item is composed of four primary program elements, each of which contributes to NOAA's Commerce and Transportation Goal and Weather and Water Goal.

NATIONAL WATER LEVEL PROGRAM

CO-OPS operates and maintains the National Water Level Observation Network (NWLON), a system of 175 observation stations located in U.S. coastal areas, the Great Lakes, and U.S. Territories and possessions. Information from the NWLON ranges from the high frequency content in the record (tsunamis and storm surge) to the long-term content (sea level trends and lake level trends). It provides vertical reference datums for all marine boundary applications, for national shoreline and nautical chart products, for coastal construction, dredging, for habitat restoration projects and for hurricane evacuation route planning. The NWLON system provides a nation-wide capability for storm surge monitoring, and serves as an observing system for the Pacific Tsunami Warning System. Some of the record lengths are over 1.5 centuries in length and represent some of the longest geophysical records in the U.S. The data are becoming increasingly valuable to climate change researchers.

CO-OPS performs quality assurance procedures on the data from NWLON stations, computes tidal and Great Lakes datums and predicts tides for all U.S. coastal areas. NWLON is a critical underpinning for tools such as the Physical Oceanographic Real-Time System (PORTS) and also serves as a federal backbone for Integrated and Sustained Ocean Observation Systems. Data collected by the NWLON supports all four of NOAA's Strategic Mission Goals: Safe and efficient maritime commerce, Coastal resource management, Climate (sea level trends), and the need for Weather and Water information.

NATIONAL CURRENT PROGRAM

NOAA and its predecessor agencies have been collecting information on the currents in various ports and harbors, and the Gulf Stream, since the mid 1800's. The Coast and Geodetic Survey first published tidal current predictions for the use by mariners in 1890 for the East Coast and 1898 for the West Coast. The program is presently operated by NOAA's Operational Center for Oceanographic Products and Services. NOAA's tidal current prediction tables are used by the largest ship operators down to the fishing industry, and the small recreational boater, kayakers, and wind surfers. Updated, accurate predictions are essential for these users to support safe and efficient navigation and for fishers to determine best catch times. In addition, accurate measurements of the currents are essential to test oil spill response strategies and provide onsite response to an emergency spill. The data are used to fine tune strategies and verify current trajectories for models.

PHYSICAL OCEANOGRAPHIC REAL TIME SYSTEMS (PORTS)

Physical Oceanographic Real Time Systems (PORTS) is a decision support tool that integrates and disseminates real-time environmental observations, forecasts and other geospatial information. In partnership with local port authorities, pilot associations, the U.S. Coast Guard, the U.S. Army Corps of Engineers, the U.S. Navy, academia, and others, PORTS has been implemented in various bays and harbors in the U.S. to measure and disseminate water levels, currents, salinity, winds, and atmospheric pressure to various users. Ten PORTS (Tampa, New York, San Francisco, Narragansett Bay, Chesapeake Bay, Anchorage, Soo Locks (MI), Los Angeles/Long Beach, Delaware Bay and Houston/Galveston) are currently operating around the U.S. PORTS information is used by mariners, port authorities, and the shipping industry to support safe and efficient navigation. Access to accurate real-time water level data and model forecast guidance allows U.S. port authorities and maritime shippers to make sound decisions regarding maximizing tonnage (based on available bottom clearance), and limiting passage times, without compromising safety.

OPERATIONAL FORECAST MODELS PROGRAM

CO-OPS also operates nowcast and forecast models, typically in conjunction with PORTS that provide short term water level and other environmental forecasts that enable better planning and decision making, particularly for vessel transits.

Historically, mariners in the United States have had only NOAA's Tide Tables to depend on for the best estimate of expected water levels and currents at a given time in the future. While these tables provide accurate predictions of the astronomic tide, they do not account for a number of other physical factors that can affect water levels, such as wind, air pressure, and river flow. NOAA has developed and is currently operating three dimensional hydrodynamic models which take such variables into account, and are able to forecast water levels and currents up to 24 hours in advance. Operational Systems currently exist for the Chesapeake Bay, and for the Port of New York / New Jersey. NOAA's models of oceanographic and atmospheric conditions, which are provided through PORTS, provide crucial advance data for re-routing of vessel traffic, port conditions forecasts, and low visibility navigation to keep traffic moving and prevent congestion or delays in other less affected areas. Marine modeling also supports predictions of the oceanic and atmospheric dispersion of hazardous materials to protect people and the environment.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

No legislation is proposed.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Navigation Services	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Tide & Current Data					
Tide & Current Data Base (CT)	20,507	18,401	21,380	22,880	1,500
Tide & Current Data Base (WW)	248	-	250	250	-
PORTS (CT)	-	2,938	-	-	-
Great Lakes NWLON	1,966	1,971	-	-	-
Alaska Current & Tide Data	1,484	1,479	-	-	-
Upper Cook Inlet Tidal Research	492	-	-	-	-
NWLON	-	2,463	-	-	-
TOTAL	24,697	27,252	21,630	23,130	1,500
FTE	102	107	107	107	-

PROGRAM CHANGES FOR FY 2006:

Tide and Current Data/National Current Program (0 FTE and +$1,500,000): NOAA requests an increase of $1,500,000 and 0 FTE for the National Current Program. The requested increase will provide resources to ensure that NOAA's Annual Tidal Current Table predictions are accountable by systematically conducting observations to update potentially dangerous tidal current predictions that are based on old or insufficient data.

Accurate knowledge of tidal currents is essential for safe and efficient navigation. The safe maneuvering of the ever-larger vessels in our Nation's constricted ports and harbors relies on accurate tidal current predictions. Knowledge of tidal currents can help vessels avoid collisions, as well as improve transit efficiency by allowing schedules to be aligned with, instead of against, current flows. Vessels over 1600 gross tons are required by US Coast Guard regulations to carry NOAA *Tidal Current Prediction Tables*.

Approximately 70% of the over 2,700 stations in the 2002 Tidal Current Tables are based on data that is well over 30 years old. Many of these stations are based on analysis of less than 7 days of data, rather than the 30-day minimum that is required to reflect the true range of tidal current conditions. Products related to the *Tidal Current Tables* have been withdrawn from publication due to potentially dangerous accuracy uncertainties. At present funding levels, measurements can be made at only the most critical locations (approximately 10 per year) and it will take over 200 years to completely re-observe all the locations in the *Tidal Current Tables*.

A 10 year recycle rate for high priority locations within the nation's top 40 ports (by tonnage) and a 25 year recycle rate for all other stations is sufficient to maintain safety. There are 350 locations associated with the 40 priority ports, therefore 35 (10%) short term observations per year would achieve the necessary 10 year refresh cycle. The remaining 2,350 locations in the US waters require 95 (4%) short term observation sites per year to achieve a 25 year refresh cycle. The requested funds would increase the number of current observation stations being observed from 10 per year to 70 per year (35 in priority areas and 35 in remaining areas), making significant progress toward an acceptable recycle rate (130 stations/year total) for the system. Over 90% of the requested funds would be outsourced for data collection contracts after capital equipment investment of approximately $250K in the first year.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs." The increase will report to the NOS performance measures of "Number of 350 priority stations (40 major port areas) with updated tidal current observations - 10% per year is desired refresh cycle" and "Number of 2,350 remaining US stations (out of 2700 total) with updated tidal current observations - 4% per year is desired refresh cycle." This increase will also report to the NOAA Strategic Plan outcome measure for Commerce and Transportation "Increased reliability, frequency, and use of marine, aviation, and surface transportation-related observations." Accurate, reliable, and timely tidal information is critical to ensure that marine transportation at U.S. ports is safe and efficient, thus enhancing commerce and economic growth.

Performance Goal: Commerce and Transportation	2006 without increase	2006 with increase
Number of 350 priority stations (40 major port areas) with updated tidal current observations - 10% per year is desired refresh cycle	8 (2%)	35 (10%)
Number of 2,350 remaining US stations (out of 2700 total) with updated tidal current observations - 4% per year is desired refresh cycle	2 (0.1%)	35 (1.3%)

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Tide and Current Data Base ($2,887,000); Great Lakes NWLON ($1,971,000); Alaska Current and Tide ($1,479,000).

Subactivity: Ocean Resources Conservation and Assessment
Line Item: Ocean Assessment Program (OAP)

GOAL STATEMENT:

NOAA's National Ocean Service (NOS) promotes healthy coastal ecosystems by ensuring that economic development in coastal areas of the U.S. is managed in ways that maintain biodiversity and long-term productivity necessary for sustained use. Working in partnerships with Federal and State agencies NOAA provides coastal managers with the scientific understanding, information, products and services needed to balance the environmental, social, and economic goals of coastal communities and NOAA

BASE DESCRIPTION:

Several NOS programs are located within the Ocean Assessment Program Line Item, including NOAA's Coastal Services Center, the NOAA Coral Reef Program, NOAA's Coastal Storms Program, and the Cooperative Institute for Coastal and Estuarine Environmental Technology.

COASTAL SERVICES CENTER

The NOAA Coastal Services Center's (Center) mission is to support the environmental, social, and economic well being of the coast by linking people, information, and technology. The Center conducts its mission under the authority of 16 U.S.C. 1456c, which authorizes NOAA to provide coastal managers with technical assistance. The Center's primary customers are the Nation's coastal managers, including natural resource managers, planners, and emergency officials. The Center provides services, products, and expertise to this community that would otherwise be unavailable or unaffordable. By doing so, the Center is effectively "buying down" the cost of improving state and local coastal management programs, enabling more effective and targeted implementation of the Coastal Zone Management Act. Partnerships between the Center and these state and local coastal management organizations give rise to more than 100 projects each year. These projects produce new tools and approaches that often can be applied nationwide.

In developing projects, the Center focuses on issues identified as important to the coastal resource management community—including hazards, habitat, the national spatial data infrastructure, coastal growth, and ocean and coastal observing systems. Customer requirements for programs and activities are determined through statutory guidance, direct interactions, needs assessments, surveys, evaluations, prototyping, competitive analysis, and partnering. Projects and activities must be 1) customer oriented; 2) focused on results; 3) undertaken in partnership; and 4) national in scope, yet local in approach. The Center is organizationally unique within NOAA, being composed of employees from throughout the bureau, and the Center's annual operating plan is coordinated among all of NOAA's line offices. The Center's functional areas of expertise include coastal management; access to information and technology; data development, integration and management; geographic information systems; remote sensing; training; and capacity building. The Center also leads the NOS-wide coordination of the Pacific Services Center in Hawaii, which brings NOS services to the State of Hawaii and other U.S. Pacific flag islands territories, and is deploying assets to other coastal areas to enable NOAA's regional representation and delivery of products and services. The Center is co-coordinating the Coastal Storms Program, a cross-NOAA line office effort, with the National Weather Service, and is working with multiple NOAA interagency and non-federal partners to help establish a combined regional and national framework and sustained capacity for an Integrated Ocean Observing System.

CORAL REEF PROGRAM

The NOAA Coral Reef Conservation Program implements priority actions to fulfill the Coral Reef Conservation Act and the U.S. Coral Reef Task Force's National Action Plan to Conserve Coral Reefs. NOAA is undertaking a series of activities to reduce human impacts on coral reefs and restore reef environments. The rapid decline and loss of these valuable marine ecosystems has significant social, economic, and environmental consequences in the U.S. and around the world. With government and non-government partners, the program supports a wide variety of priority activities including mapping and monitoring of reef ecosystems, support for state/territorial coral reef management, improved management of reef fisheries and implementation of coral reef marine protected areas.

Coral reefs are some of the most biologically rich and economically valuable ecosystems on Earth. These biologically complex ecosystems have great economic, social and cultural importance to the U.S. and other countries. They provide a wide variety of valuable products and services including:

- economic stability and food security for millions of people;
- chemicals and pharmaceuticals that contribute to improved human health;
- environmental services such as shoreline protection and climate change mitigation;
- areas of natural beauty and biodiversity; and
- significant sources of revenue and employment through tourism and other industries.

The global value of products and services from coral reef ecosystems has been estimated at over $300 billion. Coral reef ecosystems and their products and services are now seriously threatened by a variety of human impacts and environmental factors. Key threats include: over-exploitation and destructive fishing practices; pollution and sedimentation associated with urban development, deforestation and agriculture; habitat loss resulting from dredging and shoreline modification; vessel groundings and other direct physical impacts; invasive species; disease outbreaks; and impacts associated with climate change such as coral bleaching.

COASTAL STORMS

NOAA's Coastal Storms Program enhances the capabilities of coastal communities to respond to coastal storm events by developing improved products and services that address specific state/local decision-maker needs. The Coastal Storms Program will build a seamless "observation-to-user" capability that brings NOAA-wide expertise, products, and services to locales to address challenges unique to those regions. Efforts to integrate existing product service lines to meet unique needs are also included. Targeted geographies include the St. John's water management district in northeast Florida, the watersheds on both sides of the Washington-Oregon border, the international border between California and Mexico, and the coastal floodplain of Louisiana. The specific issues addressed are determined by regional needs as articulated by users. Commonalities are emerging in observations, modeling, outreach, risk and vulnerability, and decision-maker needs assessments among pilot regions.

COOPERATIVE INSTITUTE FOR COASTAL AND ESTUARINE ENVIRONMENTAL TECHNOLOGY

The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) was established in 1997 as a partnership between the University of New Hampshire (UNH) and NOAA. The mission of CICEET is to provide the scientific basis for understanding and reversing the impacts of coastal and estuarine degradation through the development and application of environmental technologies and methods. CICEET operates in partnership with the National Estuarine Research Reserve System, which enables research to be conducted at controlled, relatively undisturbed sites. CICEET works with coastal managers to select projects relevant to their technology needs and transfer technology when completed.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

NOAA will continue to work with Congress to reauthorize the Harmful Algal Bloom and Hypoxia Research and Control Act, and the Nonindegenous Aquatic Nuisance Prevention and Control Act.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Ocean Assessment Program (OAP)					
Ocean Assessment Program Base (ECO)	52,595	22,003	-	-	-
Coastal Monitoring and Prediction	1,237	-	-	-	-
Ocean Assessment Program Base (WW)	5,000	-	-	-	-
Coastal Observation Technology System	2,177	2,146	-	-	-
Coastal Ocean Research & Monitoring Program	2,473	2,438	-	-	-
NOAA ICOOS	-	7,392	-	-	-
NOAA/UNH Joint Ocean Observing Technology Center	-	3,942	-	-	-
Gulf of Alaska Ecosystem Monitoring Program	743	1,971	-	-	-
Gulf of Maine Observing System	1,979	1,873	-	-	-
Long Island Sound Observing System	-	986	-	-	-
Central Gulf of Mexico Observing System (USM)	-	1,971	-	-	-
Southeastern Coastal Ocean Observing System	1,979	-	-	-	-
So Cal Coastal Ocean Observing System (Scripps)	1,979	1,479	-	-	-
Center for Integrated Marine Technologies	2,473	-	-	-	-
Alliance for Coastal Technologies	2,473	2,463	-	-	-
Center for Coastal Ocean Observation and Analysis	2,473	2,463	-	-	-
Carolina Coastal Ocean Observing and Prediction System	2,473	2,463	-	-	-
Wallops Ocean Observation Project	1,979	1,971	-	-	-
Coastal Ocean Monitoring Network for West Florida	-	739	-	-	-
Coastal Storms	2,721	2,463	2,500	2,903	403
Cook Inlet Coastal Monitoring and Habitat	-	986	-	-	-
Beaufort NC	(65)	-	-	-	-
Pfiesteria Research and HAB Rapid Response	(213)	-	-	-	-
Coastal Services Center (ECO)	(1,772)	22,672	14,584	14,584	-
Coastal Services Center (WW)	-	-	5,000	5,000	-
Pacific Coastal Services Center	-	2,218	-	-	-

Subactivity: Ocean Resources Conservation and Assessment	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
B-WET Hawaii	495	-	-	-	-
Seacoast Science Center	-	986	-	-	-
EE Jusi Environmental Institute	-	739	-	-	-
Coastal Change Analysis	495	493	-	-	-
Harmful Algal Blooms	(171)	-	-	-	-
Lake Pontchartrain	1,966	1,479	-	-	-
CREST	366	444	-	-	-
CI-CORE	2,473	2,463	-	-	-
Aquatic Research Consortium MS	2,473	2,463	-	-	-
Coop Institute for Coastal and Estuarine Enviro Tech	6,732	6,702	6,710	6,710	-
Hawaii Coral Reef Initiative	1,237	1,479	-	-	-
Nature Conservancy of HI Marine Program	248	-	-	-	-
Nat'l Coral Reef Institute - Florida	989	986	-	-	-
Coral Reef - Puerto Rico	495	493	-	-	-
Coral Reef	26,321	24,643	24,462	25,962	1,500
National Fish and Wildlife Foundation - NFWF	1,474	689	-	-	-
JASON Education and Outreach	2,452	-	-	-	-
Ocean Health Initiative	-	17,742	-	-	-
Monterey Bay Watershed	495	493	-	-	-
South Florida Ecosystem	861	-	-	-	-
TOTAL	132,105	146,933	53,256	55,159	1,903
FTE	224	227	65	65	-

PROGRAM CHANGES FOR FY 2006:

Coastal Storms (0 FTE and +$403,000): NOAA requests an increase of $403,000 and 0 FTE for a total of $2,903,000 for the Coastal Storms Program. In FY 2005, NOAA is beginning initial efforts for its Southern California pilot, which will focus on addressing the impacts of winter storms (flooding, erosion, water quality problems). These impacts were particularly acute following the devastating Fall 2003 fires. The FY 2006 Request level is necessary to fully implement the Southern California pilot and meet commitments made for the Pacific Northwest pilot (focusing on coastal storm impacts in the

lower Columbia River and portions of the Oregon and Washington coasts), which will be in its third and final year. Without the requested increase, implementation of the Southern California pilot will be curtailed or terminated.

Coral Reef Program (0 FTE and +$1,500,000): NOAA requests an increase of $1,500,000 and 0 FTE for a total of $25,962,000, to improve the condition of coral reefs through support and implementation of locally driven 3-year action strategies.

In order to translate broad national goals into on-the-ground action, the U.S. Coral Reef Task Force initiated the Local Action Strategy (LAS) process to develop local conservation initiatives with measurable results in each of the seven U.S. states and territories with coral reefs. The strategies are locally driven 3-year roadmaps for collaborative and cooperative action among federal, state or territory and nongovernmental partners to address specific threats to coral reef ecosystems. Each LAS includes a range of projects designed to meet particular objectives for managing these threats. The goals and objectives of the LAS are linked to those found in the U.S. National Action Plan to Conserve Coral Reefs, which was produced and adopted by the U.S. Coral Reef Task Force in 2000. The following six focus areas were identified and prioritized by the USCRTF for local action: fisheries management and over-fishing, land-based sources of pollution, recreational overuse, lack of public awareness, climate change and coral bleaching, and disease. Additional focus areas were included by some jurisdictions to address key threats to coral health in that specific to local threats, including invasive species in Hawaii and population pressure in American Samoa.

Using the six priority USCRTF focus areas as a guide, Florida, Hawaii, Guam, U.S. Virgin Islands, American Samoa, Puerto Rico, and Commonwealth of the Northern Mariana Islands led development of specific Local Action Strategies for each of the locally relevant threats. Applying a collaborative decision-making process based on local needs, concerns, and capacities, each jurisdiction worked with a variety of partners to create strategies containing projects designed to address a particular issue over a 3-year implementation period. The requested increase will be used to augment state and territory grants for implementation of LAS priority projects. In addition, the increase will allow for targeted training and technical assistance to meet LAS-associated needs. Implementing additional LAS projects will significantly reduce specific threats to valuable U.S. coral reefs in each jurisdiction. The requested funding will also leverage non-NOAA resources for additional on-the-ground action.

Performance Goals and Measurement Data

Performance Goal: Ecosystems	2006 without increase	2006 with increase
Number of Local Action Strategy projects implemented to improve coral reef management efforts.	70	112

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Ocean Assessment Program Base ($8,290,000); Coastal Observation Technology System ($2,146,000); Coastal Ocean Research and Monitoring Program ($2,438,000); NOAA ICOOS ($7,392,000); NOAA/UNH Joint Ocean Observing Technology Center ($3,942,000); Gulf of Alaska Ecosystem Monitoring ($1,971,000); Gulf of Maine Observing System ($1,873,000); Long Island Sound Observing System ($986,000); Central Gulf of Mexico Observing System-USM ($1,971,000); So Cal Coastal Ocean Observing System-Scripps ($1,479,000); Alliance for Coastal Technologies ($2,463,000); Center for Coastal Ocean Observation and Analysis ($2,463,000); Carolina Coastal Ocean Observation and Analysis ($2,463,000); Wallops Ocean Observation Project ($1,971,000); Coastal Ocean Monitoring Network for West Florida ($739,000); Cook Inlet Coastal Monitoring Habitat ($986,000); Coastal Services Center ($4,502,000); Pacific Services Center ($1,318,000); Seacoast Science Center ($986,000); E.E. Just Environmental Institute ($739,000); Coastal Change Analysis ($493,000); Lake Pontchartrain ($1,479,000); CREST ($444,000); CI-CORE ($2,463,000); Aquatic Research Consortium-MS ($2,463,000); Coral Reef Program (538,000); Hawaii Coral Reef Initiative ($1,479,000); National Coral Reef Initiative-Florida ($986,000); Coral Reef-Puerto Rico ($493,000); National Fish and Wildlife Foundation ($689,000); Ocean Health Initiative ($17,742,000); Monterey Bay Watershed ($493,000).

Subactivity: Ocean Resources Conservation and Assessment
Line Item: Response and Restoration

GOAL STATEMENT:

The Office of Response and Restoration (OR&R) protects and restores coastal resources by countering and responding to environmental threats and promoting sound decision-making in the coastal zone.

BASE DESCRIPTION:

Through the OR&R, NOAA fulfills the natural resource trustee mandate of the Secretary of Commerce to protect and restore coastal resources threatened and injured by releases of oil or hazardous substances. The Office responds to environmental threats including oil or hazardous material spills, hazardous waste sites, Brownfields, and contaminated sediments. OR&R promotes the conservation and restoration of coastal natural resources such as coral reefs and estuaries. The Office's scientific information and guidance, analytical tools, and other products also can be applied to a wide range of coastal issues such as vessel groundings, coastal storms that mobilize contaminants, and port infrastructure development. OR&R also coordinates the NOS Coral Reef Program, described under the Ocean Assessment Program Line Item above. OR&R's three primary program elements contribute NOAA's Commerce and Transportation and Ecosystems Goals. The Pribilof Islands cleanup effort contributes to NOAA's Mission Support goal.

HAZARDOUS MATERIALS RESPONSE PROGRAM

As the lead science agency supporting coastal response operations, OR&R's Hazardous Materials Response Program (HAZMAT) provides the scientific basis for appropriate responses to oil and chemical spills and other hazards threatening coastal environments and communities. NOAA's HAZMAT provides critical advice on science and natural resource issues for the National Oil and Hazardous Substances Pollution Contingency Plan. NOAA's HAZMAT forecasts the movement of spilled oil or chemicals, evaluates the risk to natural and public resources, and recommends cleanup actions to expedite recovery. The program also identifies and maps sensitive coastal habitat areas along the U.S. coastline, develops modeling tools, and conducts training for the response community. NOAA's HAZMAT strengthens its response capabilities and those of the nation's response community by conducting research and monitoring, developing software and technical guidance, and transferring these tools and expertise through training locally, nationally, and internationally. As the Nation focuses on preventing, preparing for, and responding to a broad array of terrorist threat scenarios, NOAA's HAZMAT works in collaboration with other NOAA offices, Federal agencies, and community-level responders, to provide critical information and services for preparedness, response, and restoration.

COASTAL PROTECTION AND RESTORATION PROGRAM

As a natural resource trustee under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA-Superfund), Clean Water Act, and the Oil Pollution Act, NOAA protects and restores natural resources impacted by the release of oil and hazardous substances. OR&R's Coastal Protection and Restoration Program (CPR) is the first line of defense in addressing contaminant problems that threaten coastal resources. In cooperation with the U.S. Environmental Protection Agency (EPA) and other Federal and state cleanup agencies, NOAA provides assessments, integrated information, and solutions that protect and enhance recovery of coastal resources, their supporting habitats, and human health at more than 230 coastal sites each year.

NOAA's CPR Program provides technical assistance to coastal communities to cleanup and redevelop Brownfields, which helps local economies, improves public access to the coast, restores coastal natural resources, and revitalizes waterfronts. NOAA's CPR Program partners with other agencies and responsible parties to restore natural resources and improve coastal areas. Restoration of nearly 2,000 acres of wetland and stream habitat are underway or completed at more than 50 sites as a result of this program's coastal stewardship activities.

This program also supports NOAA-wide activities mandated by the Estuary Restoration Act of 2000. NOAA works with other partners to implement a national estuary habitat restoration strategy designed to ensure a comprehensive approach towards habitat restoration projects. NOAA's activities include the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects. In addition, NOAA is developing restoration databases that provide quick and easy access to accurate and up to date information regarding all projects funded under the Estuary Restoration Act of 2000, as well as information on projects throughout the country that meet the standards established as a part of the Act for monitoring and data collection to provide scientists and resource managers with information critical to successful estuary habitat restoration efforts.

DAMAGE ASSESSMENT PROGRAM

Where significant damages have occurred, NOAA works with those responsible for the harm to restore the resources or obtain compensation to pay for the restoration. As part of NOAA's Damage Assessment and Restoration Program (DARP), OR&R's Damage Assessment Center (DAC) assesses the impact to coastal and marine habitats from releases of oil or other hazardous materials and develops plans for restoring natural resources and their services. DAC develops and tests new approaches, techniques, and procedures for improved and cost-effective damage assessment and restoration of trust resources and transfers this knowledge through training and technical assistance to other natural resource trustees, coastal managers, and other decision makers. Since its inception, the DARP has recovered over $300 million in resources to restore coastal habitats.

PRIBILOF ISLANDS CLEANUP

Under The Fur Seal Act, The Pribilof Environmental Restoration Act, and the Pribilof Islands Transaction Act, NOAA is responsible for conducting environmental restoration on designated properties, and for transferring those properties to the native Aleuts when restoration is complete. NOAA performs site characterizations, assesses the magnitude and extent of the contamination, evaluates the risk to human health and the environment, and develops corrective action plans for environmental restoration. Site cleanup includes removal of debris, disposal of barrels containing hazardous materials, treatment of petroleum contaminated soils, and ground water monitoring.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

No legislation is proposed.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Response and Restoration					
Response and Restoration Base (ECO)	10,665	10,449	8,237	9,037	800
Response and Restoration Base (CT)	5,862	-	7,357	7,357	-
Coastal Protection and Restoration	-	395	-	-	-
Estuary Restoration Program	1,086	1,183	1,200	1,200	-
Damage Assessment Program	-	2,250	-	-	-
Oil Polution Act of 1990	(17)	-	-	-	-
Coastal Protection and Restoration Project	(17)	-	-	-	-
Mitigating Coastal Development Impacts/MS State Univ.	-	986	-	-	-
Marine Wildlife Noise Impacts/Univ of RI	-	98	-	-	-
Spill Response and Restoration Program	(20)	-	-	-	-
Marine Debris	-	4,928	-	-	-
Marine Debris Removal-Alaska	495	1,183	-	-	-
Marine Debris Removal-SC	173	197	-	-	-
Edisto Beach Marsh Restoration	99	-	-	-	-
Hazardous Materials Response Program	-	1,595	-	-	-
Vieques	-	986	-	-	-
Aquatic Resources Environmental Initiative	4,916	4,928	-	-	-
Center for Marine Spill Response Project	1,979	1,971	-	-	-
Pribilof Islands Cleanup and Economic Development	-	6,899	7,000	7,300	300
TOTAL	25,221	38,048	23,794	24,894	1,100
FTE	104	112	112	112	-

PROGRAM CHANGES FOR FY 2006:

Response and Restoration (0 FTE and +$800,000): NOAA requests an increase of $800,000 and 0 FTE for a total of $9,037,000 to allow NOAA to rebuild capacity for damage assessment, coastal protection, and hazardous materials response activities described above. The requested increase will allow NOAA to:

- Increase OR&R's involvement in hazardous waste sites. OR&R protects and restores NOAA trust resources at hazardous waste sites by providing technical assistance and solutions that protect and enhance recovery of coastal resources, their supporting habitats, and human health.
- Increase the number of damage assessments of coastal and marine habitats impacted from releases of oil or other hazardous materials. These assessments allow OR&R to address the most significant threats to NOAA trust resources, and work with those responsible for the harm to restore the resources or obtain compensation to pay for the restoration.
- Increase OR&R's capacity to respond to oil and chemical releases. OR&R provides scientific support to other Federal agencies and community-level responders for oil and chemical spills and other hazards threatening coastal environments and communities. OR&R forecasts the movement of spilled oil or chemicals, evaluates the risk to natural and public resources, and recommends cleanup actions to expedite recovery.

Pribilof Islands Environmental Cleanup, Long-term monitoring, and Property Transfer (0 FTE and +$300,000): NOAA requests an increase of $300,000 and 0 FTE for a total of $7,300,000 to continue clean-up operations on the Pribilof Islands as described above. Completion of the cleanup activities is approaching, with over 90% of the contaminated sites now addressed. The funds requested in FY 2006 are necessary for NOAA to fulfill the Federal government's obligation to decontaminate these islands, and transfer the land back to the native population. NOAA is responsible for performing environmental cleanup and restoration activities related to past commercial fur sealing on the Pribilof Islands in Alaska's Bering Sea. In addition, State of Alaska Public Law requires groundwater monitoring as long as the water is either above maximum contaminant levels, or risk-based levels previously agreed to via a risk assessment. While the State has no definitive rule defining the maximum period of groundwater monitoring, NOAA anticipates the State will require monitoring on both islands for up to 23 years (FY2006 - FY2028).

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Mitigating Coastal Development Impacts/MS State Univ ($986,000); Marine Wildlife Noise Impacts/Univ of RI ($98,000); Marine Debris ($4,928,000); Marine Debris Removal-Alaska ($1,183,000); Marine Debris Removeal-SC ($197,000); Aquatic Resources Environmental Initiative ($4,928,000); Vieques ($986,000); Center for Marine Spill Response Project ($1,971,000).

Subactivity: Ocean Resources Conservation and Assessment
Line Item: Oceanic and Coastal Research

GOAL STATEMENT:

See National Centers for Coastal Ocean Science.

BASE DESCRIPTION:

The activities previously described within this Line Item have been relocated to the National Centers for Coastal Ocean Science Line Item.

PROPOSED LEGISLATION:

See National Centers for Coastal Ocean Science.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Oceanic and Coastal Research					
Oceanic and Coastal Research (ECO)	19,549	-	-	-	-
Prince William Sound Science Center	495	-	-	-	-
TOTAL	20,044	-	-	-	-
FTE	62	57	-	-	-

PROGRAM CHANGES FOR FY 2006:

The activities previously described within this Line Item have been relocated to the National Centers for Coastal Ocean Science Line Item.

Subactivity: Ocean Resources Conservation and Assessment
Line Item: National Centers for Coastal Ocean Science

GOAL STATEMENT:

NOAA's National Ocean Service will conduct and support monitoring, research, assessment, and assistance for the range of NOAA's coastal stewardship responsibilities. Through the National Centers for Coastal Ocean Science, NOS provides a sound scientific and applied basis for effective coastal management decisions and conducts the high-quality science needed to predict the potential impacts of multiple stressors on coastal ecosystems and living resources.

BASE DESCRIPTION:

NOAA's National Centers for Coastal Ocean Science (NCCOS) provide national leadership in ocean, coastal, and Great Lakes science by conducting research, monitoring, and assessments to build the strong scientific foundation essential for sustainable use of coastal resources. NCCOS supports NOAA's coastal mission and builds better linkages among coastal programs of NOS by developing and maintaining a broad base of scientific experts and science capabilities through both intramural and extramural research. Coastal ecosystems are subjected to a variety of stressors including climate change, extreme natural events, invasive species, land-use, and pollution. As a focal point for coastal resource research within NOAA, NCCOS' activities primarily support NOAA's Strategic Plan Mission Goal to Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management. Through its research into the effects of climate change and freshwater inflow on coastal ecosystems, NCCOS also contributes to NOAA's goals to Understand climate variability and change to enhance society's ability to plan and respond, and Serve society's needs for weather and water information.

NCCOS is comprised of four research centers: The Center for Coastal Monitoring and Assessment (CCMA), the Center for Coastal Fisheries Habitat Research (CCFHR), the Center for Coastal Environmental Health and Biomolecular Research (CCEHBR), and the Center for Sponsored Coastal Ocean Research (CSCOR). Each center brings unique and complementary expertise and capabilities to address critical coastal resource issues. NCCOS also includes the Hollings Marine Laboratory.

COASTAL MONITORING AND ASSESSMENT (Silver Spring, MD)

Through monitoring, applied research, and assessment programs, NCCOS' Center for Coastal Monitoring and Assessment (CCMA) evaluates the environmental quality of U.S. coastal, estuarine, and Great Lakes areas and the ecosystem consequences of current and potential anthropogenic stresses on these areas. CCMA monitors toxic contaminants, nutrients, and related properties in biota, water, and sediments at over 300 sites through the National Status and Trends program. The data are used to evaluate the environmental quality at each site, to detect changes, and to determine associated biological effects of chemical contaminants. CCMA also conducts programs in applied research, monitoring, and assessment to determine: the distribution of anoxia/hypoxia; the occurrences and environmental relationships of harmful algal blooms (HABs); and the biodiversity, habitat and other ecological characteristics of U.S. estuarine, coastal, and Great Lakes areas.

COASTAL FISHERIES AND HABITAT RESEARCH (Beaufort, NC)

NCCOS' Center for Coastal Fisheries Habitat Research (CCFHR) in Beaufort, North Carolina has been a focal point for coastal habitat and fisheries research for nearly a century. The Center's research efforts are focused on estuarine processes, nearshore ocean ecosystems, biological productivity, dynamics of reef fishery resources, harmful algal blooms, and the effects of anthropogenic influence on resource productivity. Results of the Center's research are utilized by coastal managers at the Federal, state, and local level to address important environmental issues, such as controversial permit applications, environmental litigation, and the development of effective management policies.

COASTAL ENVIRONMENTAL HEALTH AND BIOMOLECULAR RESEARCH (Charleston, SC)

CCEHBR in Charleston, South Carolina, conducts applied research programs to: develop methods to characterize and detect marine biotoxins and harmful algal blooms (e.g., *Pfiesteria*) and identify hazards to marine resources and seafood consumers; develop and implement new techniques for field assessment of environmental quality and marine ecosystem health; improve detection and measurement of contaminants and evaluation of their significance to marine species and their habitats; and understand the factors linking land use in the coastal zones with the distribution and effect of environmental contaminants on living marine resources and habitats. The Cooperative Oxford Laboratory in Oxford, Maryland is part of this Center.

CCEHBR also supports a Resources Forensics program that gives law enforcement agencies an extensive array of analyses for cases involving protected marine species. Technical support relates to threatened and endangered species, consumer fraud, violation of fisheries closures, and illegal taking of game fish. Identification analyses are used to prosecute illegal activities such as importing and selling sea turtle eggs and meat, selling illegal game fish, and fishing during closure periods, as well as determination of wild versus cultured marine animals.

The **Cooperative Oxford Lab in Oxford, MD**, is affiliated with the NCCOS Center for Coastal Environmental Health and Biomolecular Research (CCEHBR) at Charleston, South Carolina, which provides scientific information required to resolve important issues related to the health of coastal ecosystems. The Oxford Lab specializes in shellfish pathology and habitat restoration research. Scientists investigate the role of disease in the distribution, abundance, marketability, and edibility of marine animal resources, determine the influence of natural and man-made environmental factors on the occurrence and persistence of diseases, and explore the use of marine animal health as an indicator of environmental health.

The Oxford facility is located on the Tred Avon River, part of the Choptank River drainage, which is part of the largest estuary on the U.S. Atlantic coast, the Chesapeake Bay. At a mid point in the Bay, the laboratory has access to the Bay's 200 mile length , with a multitude of environments, from fresh, brackish, estuarine, and marine waters. The Chesapeake Bay itself is at the conjunction of two major biotypes - Northern and Southern Species. It is the major nursery for many Atlantic species. The Oxford laboratory is the only Federal aquatic research facility on the Chesapeake Bay.

HOLLINGS MARINE LAB (Charleston, SC)

Funding for the Hollings Marine Laboratory, located in Charleston, South Carolina, is also included in the Oceanic and Coastal Research Line Item. The Hollings Marine Laboratory was established as a Joint Project Agreement between NOAA, the National Institute of Standards and Technology, the South Carolina Department of Natural Resources, the University of Charleston, SC, and the Medical University of South Carolina. This laboratory is a multi-

disciplinary institution providing science and biotechnology applications to sustain, protect, and restore coastal ecosystems, emphasizing linkages between environmental and human health.

The Hollings Marine Laboratory (HML) was formed to integrate the knowledge of marine scientists with that of the medical community. New technologies developed over the past decades for human health are now being applied to a broader range of problems, including understanding the state of marine ecosystems. HML is not only applying these new technologies, but is also examining the interrelationships between human health and marine environmental health. Laboratory scientists are using new genomics techniques to define gene sequences that indicate immune responses and disease resistance in marine organisms to various stressors. Such knowledge then allows linkages to biochemical changes, organism responses, and ecosystem alterations. Scientists are also examining better testing methods to evaluate organism physiological health so that better indicators can be developed. In addition, studies are being conducted on the biomolecular effects of different chemical contaminants resulting from human activities.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

SPONSORED COASTAL OCEAN RESEARCH (Silver Spring, MD)

The Center for Sponsored Coastal Ocean Research (CSCOR) addresses emerging coastal ocean issues across NOAA's mission responsibilities. Coastal ocean ecosystems are subjected to a variety of stressors including climate change, extreme natural events, invasive species, land and resource uses, and pollution. Research funded by CSCOR is designed to improve our ability to forecast the ecological effects of these stressors to support coastal management decisions. CSCOR supports competitive, peer-reviewed, interdisciplinary research investigations with finite life cycles conducted on a regional scale over a 3-5 year period. Funded subject areas, as well as corresponding funding levels, vary from year to year over these life cycles. These operating principles were incorporated into the design for the program to ensure the timeliness and relevance of its research in addressing coastal ocean mandates across the agency. The program relies upon established processes that reflect the requirements and advice of both the management and science communities in setting its priorities to ensure the utility and credibility of its research.

CSCOR coordinates NOAA's research efforts on a number of issues critical to effective coastal resource management. Major ecosystem studies on the joint impact of climate and harvesting on marine populations in the Gulf of Maine, the Pacific Northwest coastal waters, and the coastal Gulf of Alaska are being conducted as the United States component of the Global Ocean Ecosystems Dynamics initiative. The program also seeks to understand the biological, physical, and chemical processes that regulate HABs in major ecosystems like the Gulf of Maine, Chesapeake Bay, and Florida's Gulf Coast, while developing methods to prevent, control and mitigate the impacts of HABs. Land and resource use research focuses on the poorly understood impacts of population shifts to U.S. coastal regions, including habitat modification, nutrient and toxic chemical inputs, and fresh water diversions. Projects are underway in the Chesapeake Bay watershed, in South Florida, off the Pacific Northwest coast, and in high salinity South Carolina estuaries. NOAA is one of several Federal, state, and local agency partners working to focus the many competing interests in South Florida on restoration, sustainable use, and long-term management of the Florida Everglades and the South Florida Ecosystem. CSCOR also supports research to address the impacts of pollution on

populations of marine animal species. CSCOR funded research efforts were integral to the formulation of the Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico, and CSCOR research will aid in determining the impact of mitigation efforts proposed under the Action Plan.

PROPOSED LEGISLATION:

NOAA will continue to work with Congress to reauthorize the Nonindegenous Aquatic Nuisance Prevention and Control Act.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: National Centers for Coastal Ocean Science					
National Center for Coastal Ocean Science (NCCOS)	-	-	28,693	31,293	2,600
Extramural Research	-	-	16,660	16,660	-
CCEHBR Base	-	14,786	-	-	-
Extramural Research	-	3,942	-	-	-
LUCES & high salinity estuaries (Baruch)	-	986	-	-	-
Oxford, MD	-	4,436	-	-	-
Oxford, MD Extramural Research	-	1,971	-	-	-
Subtotal: Center for Coastal Environmental Health & Bimolecular Rsch	-	26,121	-	-	-
CCFHR Base	-	5,667	-	-	-
Extramural Research	-	1,971	-	-	-
Subtotal: Center for Coastal Fisheries Habitat Research	-	7,638	-	-	-
CCMA Base	-	5,914	-	-	-
Extramural Research	-	1,971	-	-	-
Subtotal: Center for Coastal Monitoring & Assessment	-	7,885	-	-	-
Center for Sponsored Coastal Ocean Research	-	3,647	-	-	-
Coastal Ocean Research Grants (HAB/Pfisteria/GLOBEC)	-	5,421	-	-	-
NCCOS Headquarters	-	4,928	-	-	-
Marine Env Health Research Lab - MEHRL	-	3,942	-	-	-
TOTAL	-	59,582	45,353	47,953	2,600
FTE	-	-	235	239	4

PROGRAM CHANGES FOR FY 2006:

National Centers for Coastal Ocean Science/Coastal Monitoring and Assessment (4 FTE and +$1,600,000): NOAA requests an increase of $1,600,000 and 4 FTE to conduct additional research and education efforts through the Center for Coastal Monitoring and Assessment (CCMA).

Expand and Improve Coastal Monitoring, Assessments and Forecasts, Science in Support of Coastal Zone Management, and Technology Transfer to Coastal Managers (3 FTE and +$700,000): NOAA requests an increase of $700,000 and 3 FTE to enhance the quality and quantity of ecosystem data collected in support of coastal resource conservation and management activities.

Since 1984, NOAA has maintained the longest, continuous contaminant monitoring program in U.S. coastal waters. The National Status and Trends (NS&T) Program, including the Mussel Watch and Bioeffects Assessment projects, determines the status of environmental quality in our nation's coastal and estuarine waters by monitoring chemical contaminants in sediments and benthic organisms in coastal waters. The NS&T program collects a wide range of chemical, biological and physical monitoring data that provides the information necessary for NOAA to assess the environmental health of coastal ecosystems. The long-term nature of the monitoring data allows scientists to track changes in coastal environmental quality over time.

Approximately $200,000 and 1 FTE of the requested increase will strengthen the NS&T Program's services. While the current NS&T program provides vital information for determining coastal ecosystem health, there are still key components missing from the analysis. The addition of contaminants of emerging concern as well as the expanded analysis of other contaminants is necessary to provide a more complete assessment of ecosystem health. Researchers have begun to find emerging contaminants (e.g., flame retardants, industrial surfactants, stain repellents, and pharmaceuticals) in aquatic environments; however, little is known about their presence, distribution, and concentration. Data on their distribution will be critical in determining the associated risks to aquatic animals or humans. Other contaminants, such as mercury and copper, need to be analyzed in greater detail to more realistically determine their adverse biological effects and to improve risk assessment calculations. This research will enable managers to make more informed coastal management decisions, such as how to effectively focus management strategies to reduce impacts and inputs. Users include the Environmental Protection Agency, US Department of Agriculture, states and the university community.

NOAA's request includes approximately $350,000 and 1 FTE to develop new ecological forecasting capabilities that will ultimately allow NOAA to expand the Harmful Algal Bloom (HAB) forecast system nationally, develop predictive tools to forecast the impact of freshwater delivery changes on estuaries, and begin to determine the impacts of sea level rise on coastal ecosystems. Translating scientific results and assessments into forecasts and predictions for use by resource managers is critical to the wise management of our coastal ecosystems. Forecasts help policy makers, natural resource managers, regulators, and the public to plan for potential ecological changes caused by both natural and human-induced stresses and to determine how those changes will impact people and the environment. For this reason, ecological forecasting is an essential part of NOAA's mission. Currently, only a few ecological forecasts are operational. NOAA has recently made operational a HAB forecast model for the Gulf of Mexico. HABs can cause human illness, fish kills, and marine mammal mortalities. NOAA has developed models that use satellite

imagery to predict the occurrence, trajectory, and potential landfall of HABs in Florida. Concerned coastal and public health managers are notified by an email bulletin when an event may impact coastal resources or communities. The resource managers can then use these forecasts to more effectively target field sampling. NOAA desires to expand this forecasting system nationally, however, that will require additional research to develop new algorithms and forecasting models for other regions. This increase will provide funds for applying this capability in the Pacific Northwest, California, and the Gulf of Maine. In addition, the National Centers for Coastal Ocean Science (NCCOS) seeks to develop other forecasts that will provide managers with critical information necessary for designing informed policies for the future. A recent national assessment identified key coastal and marine stresses as: 1) heightened sea level and increased storm events which negatively affect coastal and wetland development and property values; and 2) altered freshwater and nutrient delivery systems which change estuarine salinity, displace fisheries and increase susceptibility to poor water quality and to pathogenic organisms. The ability to forecast the impacts of sea level change and changes in freshwater and nutrient delivery to estuarine and coastal waters will provide the information base by which managers can protect and mitigate potential degradation. Changes in sea level and freshwater input alter wetlands that serve as nurseries and benefit a variety of terrestrial and marine species. Water quality changes directly impact fisheries and tourism by impacting sea grasses, corals, oxygen, and aesthetics. The forecasts can allow managers to focus resources on solutions that will have the most impact and on areas that are most likely to survive future changes. With this increase, NOAA will provide an ecological prediction for expected water quality changes associated with climate variation. By analyzing regional mean precipitation estimates and comparing them with chlorophyll concentrations derived from SeaWiFS satellite imagery, NOAA will predict how the movement of land based nutrients into coastal waters will affect water quality, using algal production as the indicator. In support of NOAA-funded research, NOAA will also provide validation for a set of habitat change scenarios for North Carolina resulting from expected sea level rise. These ecological forecasting efforts will assist coastal resource managers with developing appropriate management strategies. NOAA expects to develop one new ecological forecast every other year beginning in FY 2006.

An essential role of NOAA as a science agency is to transfer its knowledge and tools developed to other agencies and the public. NOAA will direct approximately $150,000 and 1 FTE of the requested increase towards technology transfer efforts to provide scientific information to coastal managers on harmful algal bloom predictions. It is imperative that NOAA provide scientific information to coastal managers to enable them to make more informed decisions regarding coastal, marine, estuarine and Great Lakes resources. This can be achieved through technical assistance, scientific publications, technical reports, and reports to Congress, as well as through developing new tools and techniques. NOAA has developed the capability to forecast the movement of harmful algal blooms of certain species in the Gulf of Mexico. This capability is used by state officials to launch a field sampling program to more clearly define the size and density of the bloom, as well as to validate the toxicity of the bloom. As a consequence, state environmental and health officials have advanced warning for a potential landfall of a bloom and the lead time to warn the public that beaches may be affected or to close shellfish beds that may be impacted.

Improve Protected Areas Research, Education and Outreach (1 FTE and +$400,000): NOAA requests an additional $400,000 and 1 FTE to conduct research and scientific activities in support of Protected Areas management. The NCCOS supports scientific and research activities in marine protected areas (MPAs), including those managed by the National Marine Sanctuary Program (NMSP), the National Estuarine Research Reserve System (NERRS), and others, such as the National Park Service. To support NOAA's stewardship responsibilities for these MPAs,

NOAA conducts scientific research to determine the status of these areas, the stressors that affect them, mitigation for these stressors, and whether mitigation efforts are successful. Specifically, NCCOS works with the NMSP to develop scientific requirements that support each Sanctuary's management goals, define hypotheses and research actions to meet the requirements, implement the research, evaluate the effectiveness of the research activities in supporting these requirements, and provide recommendations regarding the consequences of management actions on Sanctuary resources and management goals. Biogeographic assessments of four California Sanctuaries have been completed and NOAA plans to complete similar assessments in all of the Sanctuaries. Similarly, NCCOS is beginning to work to implement long-term science programs in each of the NERRS' reserves to provide critical information about how coastal ecosystems function, how human activity impacts them, and what mitigation methods can be used to improve their conditions or conserve their status. This increase will accelerate NCCOS' efforts to provide more comprehensive support to NMSP and the NERRS program so that they can be better managed to meet the goals of each protected area through a broader scientific foundation.

Strengthen the Assessment of Stressors in Chesapeake Bay (0 FTE and +$500,000): NOAA requests an increase of $500,000 and 0 FTE to provide more information on the types of stressors impacting the Chesapeake Bay to support stronger linkages to marine diseases found in commercial and recreational species of importance to the Bay.

With the increasing development around the Chesapeake Bay and the consequent increased loading of chemicals, changes in fresh water flow, and other physical conditions, marine organisms are exhibiting greater signs of stress, varying from biochemical changes that may cause decreased immune protection to bacteria and other diseases, to other external signs of stress. This request will support CCMA studies aimed at indentifying the cumulative effects and linkages between these physico-chemical alterations (temperature, salinity, new contaminants, etc) and marine organism health. NOAA will assess the ecological impacts of concentrated animal feeding operations (CAFOs), a significant source of non-point source pollution in U.S. estuaries. One product of the research will be a coastal environmental observation system tailored for the assessment of CAFO-related impacts on coastal water quality. This research will be closely coupled with research being conducted on diseases at the NCCOS/Center for Coastal Environmental Health and Biomolecular Research's Oxford, MD Laboratory, and at NCCOS' other research centers assessing environmental health and identifying indicators that can be linked to specific stressors. It will also be closely coordinated with other research in the Bay so that a fuller understanding of the complex stressors operating in the Bay can lead to more accurate forecasts and consequent management actions. Such research would provide major impetus in meeting the goals identified in the Chesapeake 2000 Agreement. Users include the Environmental Protection Agency, US Department of Agriculture, state and local governments, and the university community.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs." Specifically, NOAA will increase the number of coastal and marine ecosystems maintained at a healthy and sustainable level; improve the ecological conditions in coastal and ocean protected areas; increase the cumulative number of National Marine

Sanctuaries that have selected resources and stressors characterized by NCCOS; and increase the number of National Estuarine Research Reserves that have selected resources and stressors characterized.

Performance Goal: Ecosystems	2006 without increase	2006 with increase
Cumulative number of selected ecosystems that have the social, economic, and biological costs and benefits of human activities affecting coastal ecosystems determined.	0	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.
Number of new ecological forecasts developed and the technology transferred to the appropriate agency for the effect of specific environmental changes on selected ecosystems. (per year)	1	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.
Cumulative number of National Marine Sanctuaries that have selected resources and stressors characterized by NCCOS.	13	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.
Cumulative number of National Marine Sanctuaries that have assessments of the effectiveness of selected management actions.	1	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.
Number of National Estuarine Research Reserves that have selected resources and stressors characterized. (per year)	1	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.

National Centers for Coastal Ocean Science /Coastal Environmental Health and Biomolecular Research – Oxford, MD (0 FTE and +$500,000): NOAA requests an additional $500,000 and 0 FTE to strengthen its ability to identify causative agents of marine organism diseases.

One of the goals of the Chesapeake Bay 2000 Agreement is to develop, promote and achieve sound land-use practices that protect and restore watershed resources and water quality, maintain reduced pollutant loadings for the Bay and its tributaries, and restore and preserve aquatic living resources. To support this goal, NOAA requests an increase of $500,000 to develop a better understanding of the effects of different land use practices on the health of the Bay's resources, particularly on the incidence of disease in commercially important species in the Bay. Multiple

stressors are causing increased incidence of disease, but the precise relationships between these stressors, the causative agents of diseases, and the resource response is unknown. Better understanding of these relationships will provide managers around the Bay better information upon which to base management decisions to protect this environnment while confronting pressure for economic growth.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs." NOAA will increase the cumulative number of selected ecosystems that have the social, economic, and biological costs and benefits of human activities affecting coastal ecosystems determined.

Performance Goal: Ecosystem	**2006 without increase**	**2006 with increase**
Cumulative number of National Marine Sanctuaries that have selected resources and stressors characterized by NCCOS.	13	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.
Number of National Estuarine Research Reserves that have selected resources and stressors characterized. (per year)	1	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.

National Centers for Coastal Ocean Science /Coastal Fisheries and Habitat Research at Beaufort (0 FTE and +$500,000): NOAA requests an increase of $500,000 to conduct additional research into the processes and effects associated with growth and reproduction of Harmful Algal Blooms (HABs).

Harmful algal blooms produce toxins that contaminate shellfish, disrupt ecosystems, cause fish and marine mammal mortalities and have resulted in regional economic losses exceeding $1 billion in the past two decades. Virtually every coastal state has reported major harmful algal blooms. Increasing human habitation and utilization of U.S. estuaries and coastal ocean has put a broad range of stresses on marine ecosystems that could alter the productivity, sustainability, and natural beauty of these valued natural resources. These stresses can also lead to conditions that may be harmful to humans living near these coastal ecosystems. One such stress on ecosystems includes the appearance of harmful algal blooms (HABs) in estuaries near populated areas. It is believed that high nutrient input into estuaries initiates HABs, which produce toxins that are lethal to estuarine organisms and ecosystems. These blooms are responsible for toxins in marine food webs that can harm protected or endangered species. NOAA, through internal and sponsored

extramural research, performs a broad range of research focused on identifying, predicting, tracking, and mitigating the ecological and economic impacts of harmful algal blooms. At NCCOS' Center for Coastal Fisheries and Habitat Research (CCFHR), research is conducted on characterizing the environmental conditions that are necessary and sufficient to initiate HABs, facilitate their growth and maintenance, and factors that promote toxin production. This basic information is needed for reliable predictions on the likelihood, location, and toxicity of HABs so that the public can be warned of potential use of affected beaches and coastal managers can close shellfish beds in a timely fashion. Funding will be used for 1) development of improved molecular tools to detect toxins and monitor harmful algal species; 2) experimental and field based studies the on transfer of toxins from harmful algae through the marine food web; 3) development of conceptual and predictive, numeric models of HAB initiation and growth to facilitate forecasting of HABs. Development of more effective screening and monitoring methods has been requested by shellfish managers and public health officials in California and Washington. Pacific Northwest Tribal members need a rapid screening tool for field use to protect their people who harvest shellfish extensively. The toxin transfer studies will be used to identify the most appropriate bioindicators of toxin accumulation in the marine food web. The predictive models will help focus the monitoring efforts of public health officials and provide early warnings to resource managers and coastal businesses.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

Performance Goal: Ecosystem	**2006 without increase**	**2006 with increase**
Cumulative number of selected ecosystems that have the social, economic, and biological costs and benefits of human activities affecting coastal ecosystems determined.	0	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.
Number of new ecological forecasts developed and the technology transferred to the appropriate agency for the effect of specific environmental changes on selected ecosystems. (per year)	1	The proposed increase will impact these measures. While the contribution is not immediate, this increase does contribute to improvements in the measure beginning in years FY 2007-2010.

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Center for Coastal Environmental Health and Biomolecular Research ($7,442,000); Extramural Research ($3,942,000); High Salinity Estuaries-Baruch ($986,000); Oxford, MD ($3,712,000); Extramural Research

($1,971,000); Center for Coastal Fisheries Habitat Research ($2,224,000); Extramural Research ($1,971,000); Extramural Research ($1,971,000); Coastal Ocean Research Grants (HAB/Pfiesteria/GLOBEC) ($338,000); Marine Environmental Health Research Lab-MEHRL ($2,442,000).

Subactivity: Ocean Resources Conservation and Assessment
Line Item: Coastal Ocean Science

GOAL STATEMENT:

See National Centers for Coastal Ocean Science.

BASE DESCRIPTION:

The activities previously described within this Line Item have been relocated to the National Centers for Coastal Ocean Science Line Item.

PROPOSED LEGISLATION:

None.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Coastal Ocean Science					
Coastal Ocean Program Base	14,840	-	-	-	-
ECOHAB	(36)	-	-	-	-
Woods Hole HAB	2,473	-	-	-	-
Long Island Sound Coast Observing System	1,781	-	-	-	-
LUCES & High Salinity Estuaries	1,979	-	-	-	-
TOTAL	21,037	-	-	-	-
FTE	15	-	-	-	-

PROGRAM CHANGES FOR FY 2006:

The activities previously described within this Line Item have been relocated to the National Centers for Coastal Ocean Science Line Item.

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Subactivity: Ocean and Coastal Management
Line Item: Coastal Management

GOAL STATEMENT:

The goal of the Coastal Zone Management Act (CZMA) of 1972, as amended, (16 U.S.C. 1451 et seq.), administered by NOS' Office of Ocean and Coastal Resource Management (OCRM), is to ensure the rational use and conservation of the lands and waters of the Nation's 35 coastal and Great Lakes states and territories. OCRM provides financial and technical assistance to coastal states and territories, enabling them to: (1) develop and implement comprehensive coastal resource management programs; (2) undertake new and innovative projects to enhance management and protection of the coastal zone; and (3) establish and manage estuarine research reserves to protect estuarine areas for long-term research and education, and support coastal decision-making. The goals of Executive Order 13158 are: (1) to develop a national system of marine protected areas (MPAs) and (2) to improve the stewardship of existing MPAs.

BASE DESCRIPTION:

The Nation's coastal and ocean areas represent its most ecologically and economically important regions. Congress recognized this fact in 1972 when it passed the CZMA. This act created a national framework for coastal protection through the Coastal Zone Management program and National Estuarine Research Reserve System. Executive Order 13158 recognized the importance of these areas as well, by directing the federal government to significantly strengthen and expand the national system of marine protected areas (MPAs), working closely with state, territorial, local and tribal trustees and other stakeholders.

NOS' OCRM supports this national framework and provides leadership to balance the use and protection of the nation's coasts and oceans. All programs administered by this Office directly support NOAA's Strategic Plan Mission Goal to Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management.

Program Assessment and Rating Tool (PART): A significant portion of NOAA's Coastal Management program was reviewed with OMB's Program Assessment and Rating Tool (PART) during the FY 2005 budget process. NOAA is on track in meeting OMB's PART recommendations, including developing meaningful long-term outcome measures. The program has developed a suite of proposed outcome-oriented measures, which will be described in an upcoming Report to Congress. Eight states are participating in a pilot effort to assess data sources and refine the proposed coastal management measures for implementation. In addition, the National Estuarine Research Reserve program continues to integrate with NOAA's research programs by ensuring that the Graduate Research Fellowship Program's focus areas are aligned with NOAA's strategic plan.

CZM GRANTS

The purpose of the national Coastal Zone Management (CZM) Program is to maintain and improve the quality and utility of the nation's coastal lands and waters through a national network of federally-approved, coordinated, and supported state management programs that seek to maintain the balance between the needs of resource protection and coastal-dependent economic activity. This program recognizes the significance of coastal resources to our nation's

population and economy and promotes improved management of these important assets. Federal matching funds are provided as cooperative agreements to support state staff and community projects that address the broad spectrum of coastal management issues ranging from habitat conservation and protection of life and property from coastal hazards, to urban waterfront and port revitalization (Section 306/306A CZMA).

NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM (NERRS)

NERRS (Section 315 CZMA) is a national network of estuarine protected areas representing the diverse biological and physical characteristics of estuarine systems of the United States. Reserves are owned and operated by state agencies or universities and serve as local, regional, and national sources of technical information and testing grounds for the improvement of coastal resource management. As of FY 04, there are 26 designated reserves in 21 states and territories covering over one million acres of estuarine lands and waters, with an additional site in the designation process (Texas).

CZM PROGRAM ADMINISTRATION

The programs described above, CZM Grants and NERRS, are administered with the resources provided in the budget for CZM Program Administration. In addition to the processing of hundreds of grant awards each year, OCRM staff carry out numerous critical functions necessary to execute these programs. These functions include:

- Providing technical assistance to states in the development, implementation, and improvement of state CZM program and estuarine research reserves;
- Reviewing federal agency actions for compliance with the federal consistency provisions of Section 307 of the CZMA;
- Conducting outreach and education activities concerning coastal issues;
- Conducting programmatic evaluations of each state CZM program and NERR every three to five years;
- Analyzing national issues and trends in coastal resource management, and;
- Providing policy guidance and assistance to states on interpretation of CZMA requirements, as well as those of other federal statutes and programs, and;
- Administering outstanding loans and repayments to the Coastal Zone Management Fund from the Coastal Energy Impact Assistance Program.

MARINE PROTECTED AREAS (MPA) PROGRAM

NOAA's MPA Program, in coordination with the Department of the Interior, works in partnership with federal, state, and tribal agencies and public and private organizations and institutions to provide science, information, training, education, and technical support for the effective design and management of a national system of MPAs, and to strengthen the management of existing MPAs. The Center, a NOAA-wide collaboration, consists of a small headquarters office, field coordination offices in Boston, Massachusetts, and Monterey, California, and two technical institutes -- the MPA Science Institute, collocated with the NOAA Fisheries Lab in Santa Cruz, California, and the MPA Training and Technical Assistance Institute, collocated with the NOAA Coastal Services Center in Charleston, South Carolina.

Base activities support the objective, “Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs” under the Department of Commerce Strategic Goal of “Observe, protect, and manage the Earth's resources to promote environmental needs.”

PROPOSED LEGISLATION:

NOAA will continue to work with Congress to reauthorize the Coastal Zone Management Act.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean and Coastal Management	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Coastal Management					
CZM Grants	67,399	66,039	63,963	63,963	-
CZMA Program Administration	7,123	6,604	6,901	7,328	427
National Estuarine Research Reserve System	15,911	16,165	16,400	16,975	575
Nonpoint Pollution Implementation Grants	9,494	2,957	-	-	-
Marine Protected Areas	4,485	2,957	2,802	2,802	-
TOTAL	104,412	94,722	90,066	91,068	1,002
FTE	68	59	55	56	1

PROGRAM CHANGES FOR FY 2006:

Coastal Zone Management Act Program Administration (1 FTE and +$427,000): NOAA requests an increase of $427,000 and 1 FTE, for a total of $7,238,000 and 48 FTE, to administer the Coastal Zone Management Act and support an expanded National Estuarine Research Reserve System that includes a new reserve in Texas, as described above. The increase will support NOAA staff to work with the new reserve and the associated travel, equipment, training, rent and supply costs. When new reserves are designated, it is important that NOAA be able to provide technical assistance in research, monitoring, education, and resource stewardship to give new reserve programs a solid start. In addition, the increase will cover printing of revised reserve system information to include the Texas reserve, and contractual funds to update reserve system plans and performance measures for facilities, land acquisition, research and education to cover the addition of a new reserve.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

Performance Goal: Ecosystems	2006 without increase	2006 with increase
Number of NERRS added to the reserve system	0	1

National Estuarine Research Reserve System (NERRS) (0 FTE and +$575,000): NOAA requests an increase of $575,000 and 0 FTE to expand the National Estuarine Research Reserve System. The increase will allow NOAA to improve monitoring through a new Texas NERR, which is scheduled for designation in late 2005. This new reserve is located in a biogeographic region that is not currently represented within the System. This increase will provide operational funds to support education, stewardship and research programming at the new Reserve. Specifically, funding will provide equipment and staffing support for physical and biological monitoring to implement the NERRS System Wide Monitoring Program. It will also support implementation of NERRS education and coastal training programs at the reserve, as well as stewardship programming to support NERRS strategic goals and objectives.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs." The increase reports to the NOS Performance Measure of "Percentage of significantly upgraded management capabilities and information delivery systems at NERRS sites." The preliminary report of the U.S. Commission on Ocean Policy, released on April 20, 2004, contains several recommendations directly or indirectly related to the NERR system, and this increase will help meet those recommendations.

Performance Goal: Ecosystems	2006 without increase	2006 with increase
Number of NERRS added to the reserve system	0	1

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: CZM Grants ($3,037,000); Non-point Pollution Implementation Grants ($2,957,000); Marine Protected Areas ($198,000).

Subactivity: Ocean and Coastal Management
Line Item: Ocean Management (Marine Sanctuary Program)

GOAL STATEMENT:

The goal of the National Marine Sanctuaries Act (NMSA), as amended, (16 U.S.C. 1431 et seq.), administered by the National Marine Sanctuary Program (NMSP), is to designate, manage, and protect areas of the marine environment which possess conservation, recreational, ecological, historical, research, educational or aesthetic qualities which give them special national significance. The primary purpose of the NMSA is resource conservation and protection.

BASE DESCRIPTION:

In the Ocean Management Line Item, NOAA administers the National Marine Sanctuary System under authority of the NMSA. There are 13 designated national marine sanctuaries: Monitor (NC), Channel Islands (CA), Gray's Reef (GA), Gulf of the Farallones (CA), Fagatele Bay (AS), Cordell Bank (CA), Florida Keys (FL), Flower Garden Banks (TX/LA), Gerry Studds Stellwagen Bank (MA), Monterey Bay (CA), Olympic Coast (WA), Thunder Bay Underwater Preserve (MI) and Hawaiian Islands Humpback Whale (HI). The sanctuaries range in size from one-quarter square mile in Fagatele Bay to over 5,300 square miles in Monterey Bay, which is one of the largest marine protected areas in the world. Together, these sanctuaries encompass over 18,000 square miles of waters and marine habitats. In addition, the NMSP administers and manages the 131,818 square miles Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve (supported by both NOAA Coral Reef Conservation Program funds and National Marine Sanctuary Program funds) that is undergoing the sanctuary designation process. The special habitats of the sanctuaries include deep ocean and near-shore coral reefs, live bottom, whale migration corridors, deep sea canyons, areas of deep water upwelling, submerged banks that rise close to the ocean surface, kelp forests, and sea grass beds. With the increasing environmental pressures on our nation's coastal areas, the importance of maintaining a system of marine protected areas is evident. The National Marine Sanctuary System is increasing our knowledge and understanding of complex marine ecosystems. NOAA's sanctuaries help monitor both human and natural changes in the environment that can help us preserve our marine environments. The National Marine Sanctuary System supports NOAA's Strategic Plan Mission Goal to Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management.

NATIONAL MARINE SANCTUARY PROGRAM (NMSP)

The NMSP operates and coordinates the nation's system of marine sanctuaries. Individual sanctuary offices are responsible for the daily operation of a wide variety of education, research, monitoring and management programs. The activities that each site undertakes include: development, implementation, and systematic review of comprehensive management plans to protect these unique areas; development and implementation of local research and monitoring programs to better understand the resources and potential impacts on those resources; development and implementation of cultural resource programs to survey and inventory resources to ensure their long-term protection; development and implementation of education and outreach activities to inform the public about the value of marine resources and how human activities can impact the marine environment; enforcement of sanctuary regulations;

permitting of otherwise prohibited activities to allow valuable research and education activities; management of volunteer programs that monitor and educate on marine resources; and management of citizen advisory councils to ensure that each sanctuary is responsive to community needs. In addition, each site is engaged in a number of partnership relationships with other federal agencies, state agencies, local universities, and other local institutions.

Programmatic oversight, guidance, and support from the headquarters office ensure that the sites function as a coordinated system. Headquarters functions include the development of programmatic initiatives, such as system-wide research, monitoring, cultural resource, education, and outreach programs; policy development; budget development and tracking; legislative and regulatory initiatives; review and revisions of management plans; development and designation of new sites; and overall guidance and program direction. These functions ensure that the NMSP is an integrated system that has greater national impact than the sum of the individual site actions.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

NOAA will continue to work with Congress to reauthorize National Marine Sanctuaries Act.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean and Coastal Management	FY 2004 ACTUALS	FY 2005 CURRENTLY AVAILABLE	FY 2006 BASE PROGRAM	FY 2006 ESTIMATE	INCREASE / DECREASE
Line Item: Ocean Management (Marine Sanctuary Program)					
Marine Sanctuary Program Base	53,604	50,319	35,651	35,651	-
Marine Sanctuary Foundation / Ocean Activity Fund	-	4,928	-	-	-
Northeast Hawaiian Islands Rsrch / HI Institute of Marine Biology	-	1,479	-	-	-
Northwest Straits Citizens Advisory Commission	743	1,232	-	-	-
TOTAL	54,347	57,958	35,651	35,651	-
FTE	115	144	140	140	-

PROGRAM CHANGES FOR FY 2006:

No program changes are proposed for FY 2006.

TERMINATIONS FOR FY 2006:

The following programs, or portions thereof, have been terminated in FY 2006: Marine Sanctuary Program Base ($16,076,000); Marine Sanctuary Foundation/Ocean Activity Fund ($4,928,000); Northwestern Hawaiian Island Research/HI Institute of Marine Biology ($1,479,000); Northwest Straits Citizens Advisory Commission ($1,232,000).

Exhibit 13

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
Contribution to the NOAA Strategic Planning Goals and Objectives
(Dollar amounts in thousands)

National Ocean Service	FY 2004 Actuals		FY 2005 Currently Available		FY 2006 Base Program		FY 2006 Estimate		Inc/Dec from Base	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Commerce and Transportation										
Commerce and Transportation	597	150,326	608	141,637	608	125,955	613	144,714	5	18,759
Total CT	597	150,326	608	141,637	608	125,955	613	144,714	5	18,759
Ecosystems										
Ecosystems	588	312,929	599	364,230	607	226,263	612	232,165	5	5,902
Total ECO	588	312,929	599	364,230	607	226,263	612	232,165	5	5,902
Mission Support										
Mission Support	-	-	-	6,899	-	7,000	-	7,300	-	300
Total OE	-	-	-	6,899	-	7,000	-	7,300	-	300
Weather and Water										
Weather and Water	-	37,650	-	28,479	-	9,648	-	10,051	-	403
Total WW	-	37,650	-	28,479	-	9,648	-	10,051	-	403
Total National Ocean Service	1,185	500,905	1,207	541,245	1,215	368,866	1,225	394,230	10	25,364

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Exhibit 10

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: National Ocean Service		FY 2004 Actuals Personnel	FY 2004 Actuals Amount	FY 2005 Currently Available Personnel	FY 2005 Currently Available Amount	FY 2006 Base Program Personnel	FY 2006 Base Program Amount	FY 2006 Estimate Personnel	FY 2006 Estimate Amount	Inc/Dec from Base Personnel	Inc/Dec from Base Amount
Navigation Services											
Mapping & Charting	Pos/BA	307	88,841	307	85,315	307	75,260	313	91,619	6	16,359
	FTE/OBL	338	96,070	318	85,329	318	75,260	323	91,619	5	16,359
Geodesy	Pos/BA	175	30,201	175	31,435	175	23,856	175	24,756	-	900
	FTE/OBL	157	29,567	183	32,068	183	23,856	183	24,756	-	900
Tide & Current Data	Pos/BA	116	24,697	118	27,252	118	21,630	118	23,130	-	1,500
	FTE/OBL	102	24,494	107	27,446	107	21,630	107	23,130	-	1,500
Total Navigation Services	Pos/BA	598	143,739	600	144,002	600	120,746	606	139,505	6	18,759
	FTE/OBL	597	150,131	608	144,843	608	120,746	613	139,505	5	18,759
Ocean Resources Conservation and Assessment											
Ocean Assessment Program	Pos/BA	236	132,105	236	146,933	69	53,256	69	55,159	-	1,903
(OAP)	FTE/OBL	224	136,807	227	147,570	65	53,256	65	55,159	-	1,903
Oceanic and Coastal Research	Pos/BA	59	20,044	59	-	-	-	-	-	-	-
	FTE/OBL	62	19,944	57	215	-	-	-	-	-	-
Response and Restoration	Pos/BA	115	25,221	115	38,048	115	23,794	115	24,894	-	1,100
	FTE/OBL	104	25,713	112	38,050	112	23,794	112	24,894	-	1,100
National Centers for Coastal	Pos/BA	-	-	-	59,582	241	45,353	247	47,953	6	2,600
Ocean Science	FTE/OBL	-	-	-	59,582	235	45,353	239	47,953	4	2,600
Coastal Ocean Science	Pos/BA	16	21,037	-	-	-	-	-	-	-	-
	FTE/OBL	15	22,196	-	26	-	-	-	-	-	-

Exhibit 10

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Total Ocean Resources	Pos/BA	426	198,407	410	244,563	425	122,403	431	128,006	6	5,603
Conservation and Assessment	FTE/OBL	405	204,660	396	245,443	412	122,403	416	128,006	4	5,603
Ocean and Coastal Management											
Coastal Management	Pos/BA	76	104,412	76	94,722	72	90,066	73	91,068	1	1,002
	FTE/OBL	68	105,176	59	95,620	55	90,066	56	91,068	1	1,002
Ocean Management (Marine	Pos/BA	140	54,347	140	57,958	136	35,651	136	35,651	-	-
Sanctuary Program)	FTE/OBL	115	54,487	144	58,396	140	35,651	140	35,651	-	-
Total Ocean and Coastal	Pos/BA	206	158,759	216	152,680	208	125,717	209	126,719	1	1,002
Management	FTE/OBL	183	159,663	203	154,016	195	125,717	196	126,719	1	1,002

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM CHANGE PERSONNEL DETAIL

Activity: National Ocean Service
Subactivity: Navigation Services

Title		Grade	Number	Annual Salary	Total Salaries
Physical Scientist	Silver Spring, MD	11	1	50,593	50,593
Geodesist	Silver Spring, MD	11	1	50,593	50,593
Oceanographer	Silver Spring, MD	11	1	50,593	50,593
Physical Scientist	Chesapeake, MD	11	1	48,947	48,947
Physical Scientist	Silver Spring, MD	11	1	50,593	50,593
Physical Scientist	Silver Spring, MD	7	1	34,184	34,184
Total			6		285,503
Less Lapse	25%		-1		(71,376)
Total full-time permanent (FTE)			5		214,127
2005 Pay Adjustment (3.5%)					7,494
2006 Pay Adjustment (2.3%)					5,097
Total					226,719

Personnel Data	Number
Full-time permanent	5
Other than full-time permanent	0
Total	5
Authorized Positions	
Full-time permanent	6
Total	6

Exhibit 14

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM CHANGE PERSONNEL DETAIL

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

Title		Grade	Number	Annual Salary	Total Salaries
Program Specialist	Silver Spring, MD	11	1	50,593	50,593
Total			1		50,593
Less Lapse	25%		-5		(12,648)
Total full-time permanent (FTE)			-4		37,945
2005 Pay Adjustment (3.5%)					1,328
2006 Pay Adjustment (2.3%)					903
Total					40,176

Personnel Data	Number
Full-time permanent	1
Other than full-time permanent	0
Total	1
Authorized Positions	
Full-time permanent	1
Total	1

Exhibit 14

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM CHANGE PERSONNEL DETAIL

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Title		Grade	Number	Annual Salary	Total Salaries
Biologist	Beaufort, NC	13	1	69,762	69,762
Communications Specialist	Beaufort, NC	12	1	60,638	60,638
Economist	Silver Spring, MD	13	1	72,108	72,108
Modeler	Beaufort, NC	13	1	69,762	69,762
Modeler	Silver Spring, MD	12	1	60,638	60,638
Modeler	Silver Spring, MD	12	1	60,638	60,638
Total			6		393,546
Less Lapse	25%		-4		(98,387)
Total full-time permanent (FTE)			2		295,160
2005 Pay Adjustment (3.5%)					10,331
2006 Pay Adjustment (2.3%)					7,026
Total					312,516

Personnel Data	Number
Full-time permanent	4
Other than full-time permanent	0
Total	4
Authorized Positions	
Full-time permanent	6
Total	6

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Exhibit 15

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Navigation Services

	Object Class	2006 Increase
11	Personnel compensation	
11.1	Senior Executive Service	227
11.5	Other personnel compensation	-
11.9	Total personnel compensation	227
12.3	FICA	59
21	Travel and transportation of persons	285
25.1	Advisory and assistance services	10,717
25.2	Other services	5,280
26	Supplies and materials	351
31	Equipment	790
41	Grants, subsides and contributions	900
99	Total Obligations	18,759

Exhibit 15

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

	Object Class	2006 Increase
11	Personnel compensation	
11.1	Senior Executive Service	313
11.9	Total personnel compensation	313
12	Civilian personnel benefits	78
21	Travel and transportation of persons	23
22	Transportation of things	40
23.1	Rental payments to GSA	-
24	Printing and reproduction	25
25.1	Advisory and assistance services	150
25.2	Other services	3,265
26	Supplies and materials	67
31	Equipment	141
41	Grants, subsides and contributions	1,500
99	Total Obligations	5,603

Exhibit 15

Department of Commerce
National Oceanic and Atmospheric Administration
Operations Research and Facilities
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

	Object Class	2006 Increase
11	Personnel compensation	
11.1	Senior Executive Service	40
11.9	Total personnel compensation	40
12	Civilian personnel benefits	11
21	Travel and transportation of persons	41
22	Transportation of things	5
23.1	Rental payments to GSA	30
23.3	Communications, utilities and miscellaneous charges	2
24	Printing and reproduction	-
25.1	Advisory and assistance services	10
25.2	Other services	265
26	Supplies and materials	15
31	Equipment	8
41	Grants, subsides and contributions	575
99	Total Obligations	1,002

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